

Nov 2010

**Gerald F. Combs, Jr.****CONTACT**

Grand Forks Human Nutrition Research Center, ARS/USDA  
 2420 2<sup>nd</sup> Ave N, STOP 9034, Grand Forks, ND 58202-9034  
 work (701) 795-8456 mobile (701) 202-5699 fax: (701) 795-83103  
 e-mail: [gerald.combs@ars.usda.gov](mailto:gerald.combs@ars.usda.gov)  
 web: <http://www.gfhnrc.ars.usda.gov/>  
 home 5854 Pinehurst Dr., Grand Forks, ND 58201  
 phone: (701) 775-8465

**PERSONAL**

Languages: English (native), Mandarin (spoken), French

International experience: extensive in China and Bangladesh; also Costa Rica, Indonesia, Nepal, Taiwan, Australia, Egypt, Russia, Canada and Germany; lectured in 30 countries

Interests: American and world history, philosophy, woodworking, gardening, American theatre

**ACADEMIC TRAINING**

Ph.D. Nutritional Biochemistry (minors: Biochemistry, Toxicology), Cornell University, Ithaca, NY, 1974

M.S. Entomology (minor: Physiology), Cornell University, Ithaca, NY, 1971

B.S. Zoology (minor: General Biological Sciences), University of Maryland, College Park, MD, 1969

**EXPERTISE**

Dr. Combs' has a wide interest in Agriculture, Nutrition and Health, particularly in **improving the linkage of food production and human health and well being**. He is internationally recognized as a leader in Nutrition, having published widely and conducted research ranging from basic biochemical studies to human metabolic and clinical investigations. He has written two leading text/reference books, The Role of Selenium in Nutrition (Academic Press, 1986) and The Vitamins: Fundamental Aspects in Nutrition and Health (Academic Press, 1992; revised editions in 1998, 2007 and 2011). A leader in selenium nutrition/metabolism, his/his teams' "firsts" include:

- 1<sup>st</sup> US agricultural scientist to work in modern China (five 3-mo. tours, 1980-88 supported by the Chinese Ministry of Agriculture)
- chaired 1<sup>st</sup> international scientific meeting held in China: *3<sup>rd</sup> Internat. Symp. on Selenium in Biology & Medicine*, Beijing, China, 1984
- 1<sup>st</sup> to demonstrate anti-carcinogenic efficacy of selenium in humans
- 1<sup>st</sup> to describe endemic rickets in Bangladesh
- 1<sup>st</sup> to conduct a comprehensive study of a community *food system* in a developing country (Bangladesh)
- 1<sup>st</sup> studies of genetic determinants of selenium metabolism
- 1<sup>st</sup> to develop rapid means of measuring selenium in small grains; facilitates commodification of high-selenium grains
- 1<sup>st</sup> appointee to the USDA Senior Scientific Research Service

His current research addresses the proteomics/metabolomics of selenium in humans, including effects of adiposity. He has conducted research in the US, China and South Asia and lectured in some 30 countries.

**PROFESSIONAL EXPERIENCE**

- 2004-present Center Director, Grand Forks Human Nutrition Research Center, USDA-ARS, Grand Forks, ND
- 2002-04 Center Director (interagency appointee while a Cornell Professor), Grand Forks Human Nutrition Res. Center, USDA-ARS, Grand Forks, ND, under Interagency Personnel Agreement between USDA and Cornell
- 2008-13 Deputy Director, Great Plains Health Research Consortium, Univ. Nebraska Med. Center, Omaha, NE
- 2004-present Professor Emeritus, Division of Nutritional Sciences, Cornell University, Ithaca, NY
- 2005-present Adjunct Professor, Dept Pharm. Physiol. & Therapeutics, UND School Med. & Health Sci., Grand Forks, ND
- 2002-present Adjunct Professor, Dept of Biochem. & Molecular Biol., Univ. North Dakota School of Med. & Health Sci.
- 1999, 2001 Visiting Professor, Institute of Food and Nutrition, University of Costa Rica, San Jose, Costa Rica
- 1996 Visiting Professor, University of Sydney, Sydney, Australia
- 1995-98 Director of Graduate Studies, Field of Nutrition, Cornell University, Ithaca, NY
- 1992-2003 Cornell Biotechnology Institute, Food and Nutrition Cluster

1992-2003	Adjunct Professor of Nutrition, Dept. Animal Science, Cornell Univ., Ithaca, NY
1988-2003	Professor of Nutrition, Division of Nutritional Sciences, Cornell Univ., Ithaca, NY
1982-86	Visiting Professor, Chinese Academy of Agricultural Sciences, Beijing, China
1980-2003	Cornell Institute of Comparative and Environmental Toxicology
1980-88	Associate Professor, Nutrition, Dept. Poultry & Avian Sci. and Div. Nutritional Sci (adjunct), Cornell Univ.
1975-80	Assistant Professor, Nutrition, Dept. Poultry & Avian Sci. and Div. Nutritional Sci. (adjunct), Cornell Univ.
1973-75	Assistant Professor, Biochemistry & Nutrition, Dept. Poultry Science, Auburn University, Auburn, AL

## **ADMINISTRATIVE/LEADERSHIP EXPERIENCE**

### **Center Director**

USDA Grand Forks Human Nutrition Research Center (one of only 6 HNRCs in the USDA intramural program, the Agricultural Research Service), 2002-present. Directs all aspects of a major international research center deployed to conduct basic and applied research to elucidate the roles of nutrients, foods and physical activity in human nutrition and health; responsibilities include fiscal, personnel and facilities management and planning. Supervises and coordinates activities of 16 senior scientists with a support staff of 105 permanent employees. Develops and manages an annual budget of ca. \$10-12M. Represents Center in the formulation and implementation of the ARS National Program in Human Nutrition and to local and national ARS collaborators and stakeholders: Liaises with other federal agencies, universities, state and local officials, and various private sector interests to advance the Center's/Agency's missions. Was 1<sup>st</sup> appointee to the USDA Senior Scientific Research Service (is, thus, the only ARS Center Director expected to maintain an active independent research program). Serves on Undersecretary's Senior Advisory Group; Leads Nutrition Team, USDA Global Food Security Taskforce; represents USDA on Indo-US Joint Working Group on Maternal and Child Health. Major accomplishments:

- conceived and led internship program for Native American college students at 5 ARS laboratories/Centers;
- conceived and led the re-focusing of the Center's research mission from mineral nutrition/metabolism to obesity prevention/obesity biology;
- managed growth of Center's productivity and morale under conditions of declining/stagnant appropriated funding.

### **Executive Development Training**

- Federal Executive Development Inst. Course, "Leading Change", 90-hr course, Shepardstown, WV, 2006; Leadership training for senior federal executives; focused on human resource management in times of change; included communication, team-building, motivation.
- Procter & Gamble, Corp. training in Total Quality Management for a select group of senior Cornell Professors; week-long course on TQM principles and applications conducted by P&G senior management, Cincinnati, OH, 1992.

### **Nutrition Team Leader, Global Food Security Initiative**

Leads one of six interagency teams on Undersecretary's (Research, Extension & Education) taskforce on Global Food Security; works with other teams (Food Production; Natural Resources; Marketing & Policy; Value Chain, Food Loss & Food Safety; Capacity Building) to craft USDA Strategic Plan for Agriculture and Food Security Initiative, 2009-10.

### **Director of Graduate Studies**

Graduate Field of Nutrition, Cornell University, 1995-99; elected by the faculty; supervised and coordinated activities of three faculty committees (Admissions, Academic affairs, Nominations) and a small support staff (1.5 f.t.e.) for the annual evaluation of some 300 applicants and 120 ongoing graduate students in the Field; coordinated program support of students and their individual faculty advisory committees; served as a liaison between the Dean of the Graduate School, chairs of three academic departments and director of one academic division, and 51 faculty members in four academic units of three colleges. This was the top-ranked graduate Nutrition program in the US.

### **Coordinator, Cornell Food Systems for Improved Health (FSIH) Program**

Cornell University, 1994-2001; organized bi-weekly meetings of the working group of 20+ faculty members from 6 departments in 3 colleges; managed the a small budget (\$10-15K) allocated from the Cornell International Institute for Food, Agriculture and Development (CIIFAD). This was the first program to bring together academic scientists/scholars interested in food and health.

### **Professor directing a successful research program**

1975-2004 supervised a staff of 1-3 laboratory technicians, 1-2 animal caretakers, 1-4 graduate students, 2-3 undergraduate research aides, and a secretary (0.2 f.t.e.); secured/maintained budgetary support for all of these positions and for the laboratory operations (ca. \$200,000-400,000/yr.). This became an internationally recognized program in selenium nutrition/metabolism.

### **Served on variety of faculty committees**

A.R. Mann Library Advisory Committee (chair); Cornell Faculty Library Board; Rice Memorial Collection Committee; CALS Faculty/Staff Diversity Committee; Cornell Animal Welfare Committee (chair); Cornell Pre-Medical Evaluation Committee; faculty Search Committees (Dept Poultry & Avian Sci., Det. Animal Sci., Div. Nutr. Sci.); Graduate Field Admissions Committees (Nutrition, Animal Science, Toxicology).

**International Coordinator, Sustainable Prevention of Rickets Program Consortium**

1995-2002. Founded and led a consortium (Cornell Univ., Dhaka Univ., UNICEF-Bangladesh, SARPV [a Bangladeshi NGO], Mayo Clinic, Bangladesh Inst. of Maternal and Child Health, Memorial Christian Hospital [Malumghat, Bangladesh], and CIMMYT [Internat. Wheat & Maize Improvement Center]) to develop sustainable means of preventing calcium-deficiency rickets prevalent in southeastern Bangladesh. This effort made rickets visible as a public health problem in South Asia.

**Chair, Food-Based Approaches to Preventing Micronutrient Malnutrition Workshop**

Salt Lake City, Utah; 1995; conceived idea and generated financial support (ca. \$185,000) for workshop; supervised steering committee in developing programs; directed all logistical arrangements; coordinated press conferences and releases; chaired workshop; edited published proceedings. This effort brought international attention to micronutrient malnutrition as public health problems rooted in agricultural systems.

**Chair, 3rd International Symposium on Selenium in Biology and Medicine**

Organized 1<sup>st</sup> international scientific conference held in modern China (Beijing, China, 1984); supervised program development; made opening presentation in Mandarin; conducted press interviews; edited published (2-vols, 1138 pp) proceedings. This meeting brought Western and Chinese scientists together for the first time since WWII.

**ACTIVITIES as CENTER DIRECTOR, GFHNRC**USDA activities

USDA representative to Indo-US Joint Working Group on Maternal and Child Nutrition and Development Res., 2006-present  
Undersecretary's (for Research, Extension and Education) Senior Advisory Group, 2009-  
Nutrition Team Leader, Undersecretary's taskforce to develop USDA Global Food Security Initiative, 2009-10

ARS activities

Keynote speaker, ARS/USDA Workshop on Nutritional Enhancement of Plants, Animals and Foods, Houston, May, 2002  
Planning Committee, Northern Plains Area Leadership Conference, 2003  
Assisted National Program Staff in developing FY05 budget initiative for research to reduce obesity, May 2003  
Planned FY06 budget initiative for "National Healthy Communities" program, Feb 2004  
Chair, Leadership Conference, Salt Lake City, Apr 2005  
ARS Human Nutrition Program National Obesity Prevention Project Planning Workshops, 2006-2007  
Conceived and originated ARS Native American Internship Program, 2004-present

ARS Leadership Training

Congressional Briefing Training Course, Washington, DC, Mar, 2003  
Research Performance Evaluation Training Course, 2003  
EEO/CR Training, annually 2002-2009  
Security Training, 2002, 2004, 2006, 2007, 2008, 2009  
Cybersecurity Training, 2004, 2006, 2007, 2008, 2009  
ARS National Leadership Conference, New Orleans, Jan 2004  
ARS Northern Plains Area Leadership Conferences, 2003, 2005, 2007

Liaison Activities*State of North Dakota*

Founding partner, Healthy North Dakota, ND State Health Commission  
Founding partner, Creating a Hunger-Free North Dakota Task Force

*University of North Dakota*

University Research Council, 2002-present  
President's Board of Advisors, 2002-present  
Chair, Health Disparities Committee, Healthy North Dakota Initiative, 2002-2004  
Neurosciences Program Steering Committee, UND, 2002-2004  
Internal Advisory Committee, Center for Biomedical Research Excellence in Neurosciences, 2003-2008  
Search Committees, Dean of Nursing, 2004, 2008; Vice Pres. for Res. & Economic Dev., 2006-07; Assoc. Dean – Res., School of Medicine & Health Sci., 2007-08  
Research Committee, School of Medicine & Health Sciences, 2008-  
Co-PI (w. Dr. Ed Sauter, Assoc. Dean, School of Med & Health Sci.), Model Healthy Community Infrastructure Development Project (proposed, 2010-2013)

*Chankdeska Chikana Community College (Spirit Lake Dakota Nation)*

Cooperator in community-based health research

*United Tribes Technical College*

Human Subjects Review Committee, 2004-

Research Advisory Committee, 2004-

Cooperator in Native American Internship Program, 2004-

Cooperator in Cultural Awareness Workshop for ARS employees, 2005-

*North Dakota State University*

External Reviewer, Nutrition Program, NDSU Cooperative Extension, 2004-2006

Advisor to Food Marketing Program, College of Agriculture and Food Systems

*University of Nebraska Medical Center, Omaha*

Executive Committee, Great Plains Health Research Consortium, 2008-2013

*University of Minnesota*

Cooperator on Center for Translational Science Award Application, School of Medicine, 2008

Research Committee, Grains for Health Foundation, 2008-present

*South Dakota State University*

External Advisory Committee, Center for Biomedical Research Excellence in Community Health, 2007-

*Food Industry*

Peer Review Panel, Dry Bean Health Research Program, Northarvest Bean Growers Assoc., 2008-

Research Advisory Committee, Grains for Health Foundation, 2009-

*Grand Forks Community*

Cooperator with Grand Forks Park District in community-based health research

Coalition for a Healthy Greater Grand Forks

Planning Committee, Community Health/Fitness Center

**OTHER PROFESSIONAL ACTIVITIES**Professional Societies:

American Society for Nutrition (elected 1976): Experimental Animal Nutrition Comm., 1977-81; Nominations Comm. (chair), 1990; Award Juries, 1991 (chair), 1998, 2003-04, 2005-06; Nutr. Sci. Council, 2007-10; Soc. for Internat. Nutr. Res. (1991)

New York Academy of Sciences (elected 1974)

British Nutrition Soc. (elected 1980)

Soc. for Experimental Biology and Medicine (elected 1976)

American Assoc. for the Advancement of Science (joined 1973)

Poultry Science Association (joined 1973); Research Award Committee, 1980-81

Internat. Soc. for Trace Element Research in Humans (joined 1998)

Internat. Soc. for Medical Geology (joined 2006)

Editorial Boards

Biological Trace Element Research, 1983-present

Journal of Optimal Nutrition, 1992-2002

Nutrition Reviews, 1982-1992

Journal of Nutrition, 1982-1986

Frequent reviewer: J. Nutrition, J. Agric. Food Chem., Nutr. Biochem., Amer. J. Clin. Nutr., Proc. Soc. Exper. Biol. Med., Nutrition Res., Cancer Preven. &amp; Biomarkers, Nutr. &amp; Cancer, Eur. J. Cancer, Am. J. Epidem.

Professional Honors and Awards

Phi Kappa Phi (elected 1973)

Sigma Xi (elected 1974)

Poultry Science Assoc. Research Award, 1979

Distinguished Nutritionist Award, Distillers' Feed Research Council, 1982

Cited: "Model International Collaboration", Chinese Academy of Agricultural Sciences, 1986

Cited: "Meritorious Contributions in Cancer Prevention", University of Arizona, 1995

Cited: "Outstanding Performance", ARS, USDA, 2003, 2004, 2005, 2006, 2007, 2008, 2009

Athena Award Nominee, North Dakota, 2007

National/International Expert Panels

Chair, Pharmaceutical Industry Workshop on the International Standardization of Vitamin E, 1981

Reactor Panel, Diet Nutrition and Cancer Report, NRC/NAS, Washington, D.C.; Dec. 1981

Chair, Subcommittee on Vitamin Tolerance, Board of Agriculture &amp; Renewable Res., NRC/NAS, 1984-86

NRC/NAS Subcommittee on Vitamin Tolerances, 1985-1986 (chair)

Arsenic Technical Panel Workshop, E.P.A.; Baltimore, MD; Dec., 1986

American Council on Science and Health, Board of Scientific and Policy Advisors, 1997-present

External Review Team, USDA Grand Forks Human Nutrition Research Center, 2000  
 Expert Panel on SELECT Trial Design, NCI, July 1999, Sept 2001  
 American Council for Science and Health, 2002-present  
 International Food and Nutrition Forum, Inst of Medicine, National Academy of Sciences, 2002-03  
 Joint Working Group, Indo-US Collaborative Program on Maternal and Child Health and Devel. Res., 2003-present  
 International Nutrition Forum, National Acad. of Sciences, Washington, DC, Jan., Apr., Jun, Sept., Oct., Nov., Dec. 2003  
 WHO Working Group on Health Consequences of Long-Term Consumption of Desalinated and Low-Mineral Waters, 2003-06  
 Beans for Health Alliance, Board of Scientific Advisors, 2004-present  
 Expert Review Panel, Dietary Guidelines for Americans, 2004  
 Expert Review Panel, Mineral Tolerances of Animals, Nat. Acad. Sci., 2004-05  
 Blue Ribbon Panel on Groundwater Selenium and Nitrogen, National Water Resources Institute, 2005-2007  
 Scientific Reviewer, NIH ODS Ann. Bibliog. Significant Advancements in Dietary Supplements Res., 2004, 2005, 2006, 2007  
 Subcommittee on Military Mineral Nutrition, Nat. Acad. Sci., 2005-06.  
 NIH Special Study Sections: Mineral Metabolism, 1988, 1991; GCRCs, 1994; Diet and HIV/AIDS, 2007; Global Health, 2007  
 Joint Working Group, Indo-US Collaborative Program on Maternal and Child Health and Development Res., 2003-present  
 Expert Panel, Dry Grain Pulse CRSP, USAID, 2008  
 Expert Panel, Bioactive Food Factors Program, AFRI, CSREES, 2009  
 Research Advisory Group (chair), Biomarkers of Nutrition for Development (BOND) program, NICHD, 2009-2010  
 Expert Panel, Abu Dhabi Water Quality, 2009-2011  
 Research Advisory Group, Pulse Health Initiative, US Dry Beans Council, 2010

#### Other expert panels

North Dakota State Diabetes Expert Panel, 2010-

#### International Conference Scientific/Organizing Committees

1st Internat. Symp. on Trace Elem. in the Food Chain, Wuhan, PRC, 1990-92  
 2nd Internat. Symp. on Trace Elements in the Food Chain, 1997-98  
 9th Annual Gatlinburg Symp., 1998-99  
 6th Internat. Symp. on Metal Ions in Biology and Medicine, Intern. Org. Comm., 2000-02  
 State of the Science Conference on Health Roles of Multivitamin-Mineral Supplements, NAS, 2004-2005  
 9th Internat. Symp. on Metal Ions in Biology and Medicine, Lisbon, May 2006  
 Internat. Symp. on Selenium in Health and Disease, Ankara, October, 2006  
 3<sup>rd</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, China, Aug 1984  
 4<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Tubingen, Germany, July 1988  
 Internat. Symp on Trace Elements in the Food Chain, Nanchang, China, Oct. 1992  
 5<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Beijing, China, June 1992  
 Chair, Internat. Workshop on Agr. Approaches to Preventable Disability, Dhaka, Bangladesh, Nov, 2000  
 WHO Symp. on Health Implications of Minerals in Drinking Water, Washington, DC, March 2006  
 9<sup>th</sup> Internat. Symp. on Mineral Ions in Biology and Medicine, Lisbon, May 2006  
 7<sup>th</sup> Internat. Symp. on Selenium in Biology and Medicine, Madison, WI, June 2006  
 planning workshops, HarvestPlus, International Food Policy Research Inst., Jan 2007, Mar 2008  
 3<sup>rd</sup> Hemispheric Conference of Medical Geology, Valpariso, 2009  
 Biomarkers of Nutrition for Development (BOND) workshop, Vienna, Feb 2010

#### **INVITED PARTICIPATION AT NATIONAL/INTERNATIONAL WORKSHOPS AND CONFERENCES:**

NSF Conference on Grass-Fed vs. Grain-Fed Livestock Production, Ithaca, NY, Oct 1978  
 Nutrition Council, American Feed Manufacturers Assoc., San Antonio, TX, Nov. 1980  
 Pharmaceutical Industry Workshop on the International Standardization of Vitamin E, 1981  
 3<sup>rd</sup> International Symposium on Selenium in Biology and Medicine, Beijing, China, Aug 1984  
 Workshop on Nutritional Diseases: Research Directions in Comparative Pathobiology, NIH; Bethesda, MD; Nov 1985  
 NRC/NAS Subcommittee on Vitamin Tolerances, 1985-1986  
 Arsenic Technical Panel Workshop, E.P.A.; Baltimore, MD; Dec 1986  
 4<sup>th</sup> International Symposium on Selenium in Biology and Medicine, Tubingen, Germany, July 1988  
 International Symposium on Trace Elements in the Food Chain, Nanchang, China, Oct 1992  
 5<sup>th</sup> International Symposium on Selenium in Biology and Medicine, Beijing, China, June 1992  
 PAMM Workshop on Micronutrient Malnutrition, Papendal, The Netherlands, June, 1994  
 Bristol-Myers Squibb/Mead Johnson Symposium "Beyond Nutritional Recommendations: Implementing Science for Healthier Populations", Washington, DC, June 1995

Workshop "New Approaches, Endpoints and Paradigms for RDAs of Mineral Elements", Grand Forks, ND, Sept 1995  
 Pet Food Council, Chicago, Ill, Nov 1996  
 AAAS Food Systems Symposium, Seattle, Feb 1997  
 Tufts Food Systems Workshop, Boston, MA, March, 1997  
 Pet Food Forum, Chicago, Ill, April, 1998  
 Gore-Cernamyrdin Commission on Health Workshop on Selenium, Tyumen, Siberia, June, 1998  
 IFPRI Conf. on "Improving Human Nutrition through Agriculture: the Role of International Agr. Res.", Los Banos, Oct, 1999  
 9<sup>th</sup> Gatlinburg Symp., "Plants, Nutrition and Human Health", Knoxville, Tenn., Oct., 1999  
 2<sup>nd</sup> Internat. Conf. on Food Factors, Kyoto, Japan, December, 1999  
 Internat. Workshop on Agricultural Approaches to Preventable Disability, Dhaka, Bangladesh, Nov, 2000  
 Internat. Symp. on Diet and Chronic Diseases, Univ. Costa Rica, San José, CR, Feb., 2001  
 Workshops (2), "Plant Breeding as a Strategy to Address Micronutrient Malnutrition", CIAT, Cali, Colombia, Jan and Feb, 2001  
 Micronutrient Consultation, Bill and Melinda Gates Foundation, Seattle, July 2000  
 ARS/USDA Workshop on Nutritional Enhancement of Plants, Animals and Foods, Houston, May, 2002  
 International Nutrition Forum, National Acad. of Sciences, Washington, DC, Jan., Apr., Jun, Sept., Oct., Nov., Dec. 2003  
 NIH Conference "Vitamin D: Data Needs and Strategies for Achieving Effective Public Policy", Bethesda, MD, Oct., 2003.  
 Amer. Soc. of Horticultural Sci., Colloquium on Genetics, Genomics & Human Nutrition, Providence, RI, Oct. 2003  
 Working Group on Nutrient Minerals in Drinking Water and Potential Health Consequences of Long Term Consumption of Desalinated and Other Low Mineral Content Waters, WHO, Rome, Nov. 2003  
 Institute of Food Technology Summit Conference on Roles of Foods in Obesity Prevention, New Orleans, Feb 2004  
 8<sup>th</sup> Internat. Symposium on Mineral Ions in Biology and Medicine, Bangkok, May 2004  
 6<sup>th</sup> meeting of the International Society for Trace Elements Research in Humans, Banf, Nov 2004  
 Annual meeting, US Water Quality Association, Las Vegas, May 2005  
 Finish Selenium Symposium, Ministries of Health and Agriculture, Helsinki, Sept 2005  
 WHO Symposium on Health Implications of Minerals in Drinking Water, Washington, DC, March 2006  
 9<sup>th</sup> Internat. Symposium on Mineral Ions in Biology and Medicine, Lisbon, May 2006  
 7<sup>th</sup> Internat. Symposium on Selenium in Biology and Medicine, Madison, WI, June 2006  
 Congress on Essential Minerals and Trace Elements, Stuttgart, Sept. 2007  
 Program planning workshops, HarvestPlus, International Food Policy Research Inst., Jan 2007, Mar 2008  
 Environmental Systems of Public Health Workshop, NIH, Sept 2008  
 Internat. Workshop on Agricultural Approaches to Preventable Disability, Dhaka, Bangladesh, Nov, 2000  
 Biomarkers of Nutrition for Development (BOND) workshop, Vienna, Feb 2010  
 Pulse Health Initiative Workshop, Beltsville, MD, Feb 2010  
 46<sup>th</sup> Annual Conference, Assoc. for International Agriculture and Rural Development, Washington, June 2010

## TEACHING EXPERIENCE

### Auburn University

**Animal Science 130 – Animal Nutrition** (Spring, 4 hrs) – 1974. Undergraduate course in fundamentals of animal nutrition, with emphases on metabolism, energetics, proteins/amino acids, vitamins and minerals.

### Cornell University

**Animal Sciences 230 -- Poultry Biology** (Spring, 3 hrs) – 1974-84 – Undergraduate course in avian biology and management for the production of meat and eggs. Included weekly laboratory and 2-3 field trips to local/regional poultry production and food processing facilities.

**Nutritional Sciences 604 - The Vitamins** (Fall, 2 hrs) - each year 1975-2001. Graduate/senior level course covering the nutritional aspects of the vitamins, including recent developments in understanding the nutritional and biochemical interrelationships of vitamins with other nutrients and drugs. The course employs extensive in-class discussions using a series of medical case reports which as examples of the process of identifying the metabolic bases of vitamin-related functions in health. Wrote textbook, now in its 3<sup>rd</sup> revised edition (The Vitamins: Fundamental Aspects in Nutrition and Health, Academic Press, 2007) for use in this course.

**Nutritional Sciences 380 - Integrating Food Systems and Human Nutrition Needs** (Spring 2 hrs) – 1993-2001. Interactive, team-based, research/presentation experience in identifying ways to improve linkage of food systems with nutritional needs of people. (conceived course)

**Nutritional Sciences 120 - *Contemporary Perspectives in Nutrition*** (Spring 1 hr) - 1991-1994. Presentations by nutrition professionals with guided discussion to provide undergraduate majors in nutrition and other health related fields views of the breadth of disciplines employed in the field of Nutrition. (conceived course)

**Nutritional Sciences 659 - *Nutrition and Physiology of the Mineral Elements*** (Spring, alternate years, 2 hrs) 1992-2000. Graduate level lecture course on the nutritional and toxicological aspects of minerals. (co-taught with Dr. Xingen Lei)

#### **GRADUATE ADVISING**

Auburn University (1973-1975): Graduate Faculty in Animal Science; \_Majors: 1 Ph.D., 1 M.S.

Cornell University (1975-2002): Graduate Fields: Nutrition, Environmental Toxicology, Animal Science;

Majors: 15 Ph.D., 14 M.S.; Minors: 23 Ph.D., 20 M.S.

University of North Dakota, 2002-2006: *ad hoc* committee member: 1 Ph.D. (Nutrition)

North Dakota State University, 2005-2008: *ad hoc* committee member: 1 Ph.D. (Biochemistry and Molecular Biology)

External doctoral examiner, University of Otago, Dunedin, 2000

External doctoral examiner, University of Sydney, 2001

External doctoral examiner, Massey University, Palmerston, 2004

External doctoral examiner, Curtin University of Technology, Perth, 2008-09

External doctoral examiner, University of Adelaide, 2009

#### **POST-DOCTORAL TRAINING**

Cornell: 10 post-doctoral fellows, 9 visiting scientists, and 6 professors on sabbatical leaves

USDA: 2 post-doctoral research associates, 1 visiting scientist

#### **FACULTY MENTORING**

Cornell: Dr. Xingen Lei, Dept. Animal Science

USDA: Dr. Eric Murphy, Dept. Pharmacol., Physiol. & Therapeutics, School of Medicine & Health Sci., Univ. North Dakota

Dr. Cindy Anderson, College of Nursing, Univ. North Dakota

#### **OTHER**

Cornell College of Agriculture & Life Sci. Teaching Effectiveness Workshop (both as student and as instructor)

Mentored interns, ARS Native American Internship Program, 1 student each summer: 2006, 2007, 2008, 2009

#### **RESEARCH ORGANIZATION (personal research)**

##### *Funding Sources*

Auburn University	Alabama Agr. Expt. Station Alabama Toxicology Laboratories	Gold Kist Poultry, Inc.
Cornell University	NY State Agr. Expt. Station American Chemical Society NIH (3 R01's, 1 P01) USAID Rockefeller Foundation Smith, Kline Beacham, Inc. DeGussa Corp.	Agway, Inc. Monsanto, Inc. USDA (2 grants, 1 cooperative agreement) Cornell Internat. Inst. for Food, Agr. & Development Thrasher Foundation Hoffman-LaRoche Corp. BASF Corp.
GFHNRC	Congressional appropriations Congressional earmarks (4) Northarvest Bean Growers Minn-Dak Growers	Nat. Cancer Institute US Army Institute for Research in Environmental Medicine North Dakota Beef Commission South Dakota Wheat Commission

##### *Current Collaborations*

Arkansas Children's Nutrition Res. Center	National Cancer Institute	University of North Dakota
Nat. Inst. Diabetes, Digest & Kidney Dis	Arkansas Children's Hospital	Oregon State University
Institut fuer Experimentelle Endocrinol, Berlin	Ohio State University	University of Rhode Island
University of Nebraska Medical Cntr, Omaha	Roswell Park Cancer Institute	University of Saskatchewan
US Army Inst. for Res. in Environ. Med	Hormell Institute	University of Copenhagen
ARS Great Plains Res Lab	Wythe Laboratories	Purdue University

#### **INVITED LECTURES (353, 1975 to date):**

- 1975** "Accumulation and Depletion of Low-Level Pesticides in Broilers" Maryland Nutr. Conf., Wash., D.C., Mar  
"Impact of Mycotoxins in Poultry Feeds" Agway College Poultry Feed Conf. Board, Syracuse, NY; Oct

- "Problems with Molds and Mycotoxins in Poultry Feeds" Cornell Nutrition Conference, Buffalo, NY; Nov  
 "Impact of Mycotoxins in Poultry Production" Western New York Poultry Producers, Hamburg, NY; Nov
- 1976** "Selenium: Biochemical Functions and Importance in Poultry" Georgia Nutr. Conf., Atlanta, GA; Feb  
 "Biochemical Bases for Nutritional Action of Selenium", Dept. An. Sci., Univ. Georgia, Athens, GA; Feb  
 "Influences of Antioxidants on the Nutritional Value of Selenium" Field of Nutr., Cornell U., Ithaca, NY; Mar  
 "Potentials in Broiler Production" Broiler Business Mag. Elite Nutritionists Roundtable, Wash., D.C.; Mar  
 "Factors Affecting the Utilization of Vitamins D and E in the Chick" Cornell Nutr. Conf., Syracuse, NY; Nov
- 1977** "Modes of Action of Selenium and Vitamin E" Nutrition Seminar, Ralston Purina Co., St. Louis, MO; Feb  
 "Influences of Vitamin A and Reducing Agents on Selenium Function" Distillers Feed Res. Conf., Cincinnati, OH; Mar  
 "Amino Acid Requirements of Broilers" Delmarva Poultry Council, Georgetown, DE; May  
 "Role of Selenium in Poultry Nutrition" Delmarva Poultry Council, Georgetown, DE; May  
 "Nutr. Interrelationships of Selenium and Vitamin E" AIN Symposium on Trace Elements, Chicago, IL; Apr  
 "The Selenium Needs of Laying and Breeding Hens" Cornell Nutrition Conference, Syracuse, NY; Nov
- 1978** "Interrelationships of Nutrition and Disease" AIN Poultry Nutrition Conf., Atlantic City, NJ; April  
 "Nutritional Interrelationships of Selenium and Vitamin E" Gordon Res. Conf. on Food & Nutr., New London, NH; June  
 "By-Product Utilization in Poultry Production" NSF Conf. on Grass-Fed vs. Grain-Fed Livestock Systems, Cornell, Ithaca, NY; Oct  
 "Calcium Homeostasis in Strains Selected for Differences in Eggshell Strength" Cornell Nutr. Conf., Syracuse, NY; Nov
- 1979** "Feeding Least-Cost Diets" Pennsylvania Poultry Federation Conference, Lancaster, PA; Mar  
 "Control of Feed Intake in Poultry - the UGF Effect" Distillers Feed Res. Conf., Louisville, KY; Mar  
 "A Selenium Model System of Periacinar Fibrosis" NIH Wkng Group on Selenium & Cystic Fibrosis, Bethesda, MD; Mar  
 "Review of Selenium in Poultry Nutrition" Hearings, NRC/NAS Subcomm. on Selenium, Wash., DC; Apr  
 "Biochemical Interrelationships of Vitamin E and Selenium" , Main Lab., BASF AG, Ludwigshafen, Germany; June  
 "Critique of Selenium in Nutrition" 3rd Int. Symp. on Organo-Selenium and Tellurium Chemistry, Metz, France; June  
 "Biochemical Studies of Mycotoxins in Poultry Nutrition" Agway College Poultry Conf. Board, Syracuse, NY; Oct  
 "Palatability of Poultry Feeds" Cornell Nutrition Conference, Syracuse, NY; Nov
- 1980** "Role of Shell Ultrastructure in Determining Eggshell Quality" Southern Poultry Sci. Mtg, Atlanta; Mar  
 "Factors Influencing the Palatability of Poultry Feeds" Fisheries Symp., Nat. Fish Meal and Oil Assoc., Wash., DC; Mar  
 "Metabolism of the Sulfur-Containing Amino Acids in the Selenium-Deficient Chick", Animal Nutr. Res. Council, Wash., DC; Apr  
 "Selenium- and Vitamin E-Related Diseases of Poultry" Roche Seminar, Gainesville, GA; May  
 "Role of Selenium in Pancreatic Function" 2<sup>nd</sup> Internat. Symp. on Selenium in Biology and Medicine, Lubbock, TX; May  
 "Chemistry of Selenium" Hearings, NRC/NAS Subcommittee on Selenium, Washington, D.C.; May  
 "Role of Selenium and Vitamin E in Drug Metabolism" Clin. Toxicol. Seminar, VA Med. Center, Minneapolis, MN; June  
 "Antioxidants in Animal Nutrition" Seminar, Agricultural Chemical Div., Monsanto Co., St. Louis, MO; June  
 "Roles of Selenium and Vitamin E in Drug Metabolism" NIH Wkshp., Rockville, MD; June  
 "Structural and Hereditary Factors That Influence Eggshell Quality", Shaver Poultry Company, Cambridge, Ontario, Canada; June  
 "Assessment of Vitamin E Status in Man and Animals" Nutr. Soc. Ann. Meeting, Glasgow, Scotland; June  
 "Is Cystic Fibrosis Related to Selenium?" Minerals Interest Group, Cornell University, Ithaca, NY; October  
 "Fluorosis in the Laying Hen" Cornell Nutrition Conference, Syracuse, NY; Nov  
 "Vitamin E and Selenium in the Metabolism of Sulfur-Containing Amino Acids", Cornell Nutr. Conf., Syracuse, NY; Nov  
 "Vitamins and Immune Function" American Feed Manufacturers Assn., San Antonio, TX; Nov
- 1981** "Studies of Bone Metabolism in Growing Chickens", S-131 Technical Meeting, Atlanta, GA; Feb  
 "Role of Selenium in Pancreatic Function", Gen. Med., Univ. Missouri Med. School, Columbia, MO; Feb  
 "Selenium in the Protection from Oxidant Drug Toxicity", Univ. Missouri Med. School, Columbia, MO; Feb  
 "The Problem of Eggshell Quality", Seminar in Animal Nutrition, Univ. of Missouri, Columbia, MO; Feb  
 "Mechanisms of Action of Selenium and Vitamin E", Nutrition Emphasis Week, Univ. Missouri, Columbia, MO; Feb  
 "Selenium and Drug Metabolism", Dept Food Chem., Univ. Helsinki, Helsinki, Finland; Mar  
 "Role of Selenium in Glutathione Peroxidase", Seminar, Univ. of Helsinki School of Vet. Med., Helsinki, Finland; Mar  
 "Influences of Selenium on the Metabolism of Foreign Compounds", Anim. Sci. Seminar, Cornell Univ., Ithaca, NY; Mar  
 "Role of Selenium and Vitamin E in the Immune Response", NIH Wkshp-Trace Elements & Immunity, Bethesda, MD; Sept  
 "What is the Evidence Relating Selenium and Cancer?" , Minerals Seminar, Cornell Univ., Ithaca, NY; Oct  
 "Bioavailability of Selenium", US-China Selenium Symp., Inst. Health, Chin. Acad. Med. Sci., Beijing, PRC; Nov  
 "Role of Selenium in Pancreatic Function", US-China Selenium Symp., Chin. Acad. Med. Sci., Beijing, PRC; Nov  
 "Relationship of Selenium and Carcinogenesis", Exp. Carcinogen. Group, Chin. Acad. Med. Sci., Beijing, PRC; Nov  
 "Recent Findings in Poultry Nutrition Research", Inst. Animal Sci., Chin. Acad. Agr. Sci., Malianwa, Beijing, PRC; Nov  
 "Influence of Diet on the Body Composition of Chicks", Cornell Nutrition Conf., Syracuse, NY; Nov
- 1982** "Endemic Selenium Deficiency in China", Univ. Wisconsin, Madison, WI; Feb  
 "Selenium in Human Nutrition in China", Nutrition Program Seminar, Univ. Conn., Storrs, CT; Mar  
 "The Role of Selenium in the Nutrition of Man and Animals", Distillers Feed Res. Conf., Louisville, KY; Mar  
 "Towards a Metabolic Understanding of the Nutritional Role of Selenium", Univ. Kentucky, Lexington, KY; Mar

- "Influence of Non-Protein Nitrogen on Carcass Composition of Chicks", Nat. Feed Ingrid. Assoc., Des Moines, IA; Mar  
 "Vitamin E, Selenium and Sulfur Amino Acids Interactions", Nat. Feed Ingrid. Assoc., Ames, IA; Apr  
 "Nutritional and Metabolic Interrelationships of Vitamin E and Selenium", Hoffmann La Roche, Inc., Nutley, NJ; Apr  
 "Metabolic Protection Against Oxidant Drugs", Res. Seminar, USDA Human Nutr. Res. Center, Beltsville, MD; May  
 "Metabolic Questions Concerning the Utilization of Methionine Analogs", Monsanto Co., St. Louis, MO; May  
 "Selenium Deficiency and Excess", Keynote address, Soc. for Environ. Geochem. Health, Augusta, GA, June  
 "Factors Affecting the Bioavailability of Selenium for the Chick", Cornell Nutr. Conf., Syracuse, NY; Nov
- 1983** "Animal Agriculture in China", Agricultural Chemicals Group Seminar, Monsanto Co., St. Louis, MO; Mar  
 "Comments on Relationship of Selenium and Heart Disease", Univ. North Carolina School of Public Health, Chapel Hill, NC; May  
 "Potentials for Improving the Efficiency of Animal Protein Production", Monsanto Co., St. Louis, MO; June  
 "Animal Model Studies of Selenium Deficiency", FASEB Summer Res. Conf., Saxton's River, VT; July  
 "Introductory Remarks", Annual Meeting, Animal Nutrition Research Council, Catonsville, MD; Aug
- 1984** "The Discovery of Vitamin E", lecture to combined nutrition classes; Dept Foods Nutr., Univ. Georgia, Athens, GA; Feb  
 "The Recognition of Selenium as an Essential Nutrient", Dept Foods Nutr., Univ. Georgia, Athens, GA; Feb  
 "Implications of Vitamin E and Selenium in Health", Nutrition Program, Univ. Georgia, Athens, GA; Feb  
 "Studies on the Utilization of Methionine-Active Compounds by the Chick", Monsanto Round Table, Houston, TX; Mar  
 "Utilization of Methionine Isomers and Analogs by the Chick", Pacific Northwest Animal Nutr. Conf., Pasco, WA; Oct  
 "Roles of Selenium and Vitamin E in the Nutrition of Poultry", Pacific Northwest Animal Nutr. Conf., Pasco, WA; Oct
- 1985** "The Roles of Selenium and Vitamin E in Health and Nutrition", USDA HNRC on Aging, Tufts Univ., Boston, MA; Jan  
 "Bioavailability of Selenium in Human Milk", Expert Conf. Selenium, Infant Formula Council, Wash., DC; Feb  
 "Roles of Selenium in the Metabolism of Foreign Compounds", NIH Consensus Conference on Strategies Needed to Develop Selenium Compounds as Cancer Chemopreventative Agents, Bethesda, MD; Feb  
 "Selenium and Carcinogenesis", AIN Symp. on Selenium and Carcinogenesis, FASEB, St. Louis, MO; April  
 "Assessing the Biological Availability of Selenium", Wkshp., Mead Johnson Company, Evansville, IN; May  
 "Roles of Selenium and Vitamin E in Animal Nutrition" Taiwan Livestock Res. Inst., Tainan, Taiwan; May  
 "Metabolic Functions of Selenium and Vitamin E", National Taiwan University, Taipei, Taiwan, ROC; May  
 "Current Research on Selenium and Vitamin E", Chungshing University, Taichung, Taiwan, ROC; May  
 "Biopotency of Methionine Analogs", Feed Wkshp., American Feed Council, Nat. Taiwan University, Taipei, Taiwan; May  
 "Vitamin and Mineral Supplements for Poultry Feeds", Feed Wkshp, National Taiwan Univ., Taipei, Taiwan, ROC; May  
 "An Approach to Determining Selenium Toxicity in Humans", NIH Working Group on Strategies Needed to Develop Selenium Compounds as Cancer Chemopreventative Agents, Silver Spring, MD; Aug  
 "History of Vitamin Discovery", Dept Poultry & Avian Sci., Cornell Univ., Ithaca, NY; Sept  
 "Selenium and Oxidative Injury", NIH Conf. on Nutr. Diseases: Research in Comp. Pathobiology, Bethesda, MD; Nov  
 "Inhibition of Selenium Utilization by Mercaptans", Inst. Health, Nat. Center Prev. Med., Beijing, PRC; Dec  
 "Strategies for Satisfying the Micronutrient Needs of Animals", Inst. of An. Sci., Chin. Acad. Agr. Sci., Beijing, PRC; Dec  
 "Recent Findings in Poultry Nutrition Research", Inst. of Animal Science, Chin. Acad. of Agric. Sci., Beijing, PRC; Dec
- 1986** "Vitamins in Animal Nutrition", Animal Nutrition Seminar, Beijing Agricultural College, Beijing, PRC; Jan  
 "Minerals in Animal Nutrition", Animal Nutrition Seminar, Beijing Agricultural College, Beijing, PRC; Jan  
 "Designing Vitamin-Mineral Supplements for Animal Feeds", Shandong Acad. Agr. Sci., Jilin, Shandong, PRC; Jan  
 "Optimizing Eggshell Quality in the Laying Hen", Beijing Animal Sci. and Vet. Assn., Beijing, PRC; Jan  
 "Recent Studies of the Nutritional Biochemistry of Selenium", Cancer Inst., Chin. Acad. Med. Sci., Beijing, PRC; Jan  
 "Current Topics in Applied Poultry Research", Dept. Animal Sci., Shandong Agric. College, Jilin, Shandong, PRC; Jan  
 "Biochemical Bases for the Nutritional Essentiality of Selenium", Div. Nutr. Sci., Univ. Ill.s, Urbana, IL; Mar  
 "Emerging Needs of Chinese Animal Agriculture", Monsanto Co., St. Louis, MO; Apr  
 "Emerging Needs of Chinese Animal Agriculture", Degussa Corp., Teterboro, NJ; Apr  
 "The Selenium Requirements of Americans", Dept Poultry & Avian Sci., Cornell Univ., Ithaca, NY; May  
 "Selenium in the American Food Supply", Nat. Nutrient Data Bank Conf., Univ. Georgia, Athens, GA; June  
 "Nutritional Influences on Oxidant Drug Toxicity", Environ. Tox. Seminar, Cornell Univ., Ithaca, NY; Oct  
 "Natural Inhibitors of Selenium-Dependent Glutathione Peroxidase", Cornell Nutr. Conf., Syracuse, Nov
- 1987** "Nicotinamide and Nicotinic for Poultry", Degussa Technical Symposium, Guelph, Ontario, Canada; April  
 "Vitamin E- and Selenium-Related Disorders of Livestock", Guelph Nutr. Conf., Guelph, Ont., Canada; Apr  
 "Protective Roles of Minerals Against Free Radicals", FASEB-AIN Symp. on Free Radical Damage: Protective Role of Antioxidant Nutrients, Washington, D.C.; Apr  
 "Plan for a Diet Assessment Module", Amer. Acad. of Clin. Derm., San Antonio, TX; Dec  
 "Roles of Antioxidant Nutrients in Health: Is Selenium Related to Carcinogenesis?" St. Michael's College, Burlington, VT; Dec
- 1988** "Vitamin E- and Selenium-Related Disorders of Animals", Dept. Animal & Poultry Sci., U. Florida, Gainesville, FL; May  
 "Understanding the Roles of Selenium and Vitamin E in Health", Pew Lecture, Univ. of Florida, Gainesville, FL; May

- "Assessment of Vitamin E Biopotency", BASF AG, Ludwigshafen, Germany; July  
 "Critique of Animal Testing of Nutritional Products", BASF AG, Ludwigshafen, Germany; July  
 "In Vivo Inhibition of Selenium-Dependent Glutathione Peroxidase", 4th Intern. Symp. Se Biol. Med., U. Tübingen, Germany; July  
 "Vitamin Tolerances of Livestock", Cornell Nutr. Conf., Syracuse, NY; Oct  
 "Coordinating High-Volume Selenium Analyses with Analytical Quality Assurance", Am. Acad. Clin. Dermatol., New Orleans, Dec  
 "Assessing Human Selenium Status", Amer. Acad. Clin. Dermatol., Wash., D.C.; Dec
- 1989** "Roles of Selenium and Vitamin E in Health", Nutr. Prog., Clemson Univ., Clemson, SC; Feb  
 "Nutritional Prevention of Skin Cancer", Div. Nutr. Sci., Cornell Univ., Ithaca, NY; Mar  
 "Understanding the Roles of Selenium and Vitamin E in Health", Nutr. Cluster, Univ. Missouri, Columbia, MO; July  
 "Understanding the Roles of Selenium and Vitamin E in Health", Genessee Dietetics Assoc., Rochester, NY, Sept  
 "Effects of Selenium and Vitamins E and C on Glutathione Metabolism in the Chick", Cornell Nutr. Conf., Syracuse, Oct
- 1990** "Understanding the Roles of Selenium and Vitamin E in Nutrition and Health", Univ. Arizona, Tucson, AZ, Oct  
 "The Metabolism of Selenium", Clinical Invest. Mtg., Nutr. Prev. Skin Cancer Proj., Atlanta, GA, Dec
- 1991** "Selenium in the Prevention of Skin Cancer", Field of Nutrition Seminar, Cornell Univ., Ithaca, NY, Mar  
 "Choosing Parameters of Selenium Status", opening address, AIN Symp. Assessment of Se Status, Atlanta, GA., Apr  
 "Experiences in the Use of Concept Maps in Teaching The Vitamins", College of Agr. & Life Sci. (Cornell) Teaching Effectiveness Workshop, Casanovia, NY, June  
 "The Year in Selenium Research", Safety Monitor & Adv. Comm., Nutr. Prev. Skin Cancer Project, Rochester, NY, Dec
- 1992** "The Selenium RDA and RfD Dichotomy", EPA Workshop Risk Assessment of Essential Elements, Herndon, VA, Mar  
 "Biochemical Bases for the Nutritional Function of Selenium", Dept Human Nutr., U. Texas, Austin, TX, Mar  
 "Selenium Research: The Next Horizon", opening address, AIN Symp., Anaheim, CA, Apr  
 "Linking Production Agriculture and Human Nutrition", Nat. Agr. Res. and Extension Users' Adv. Board, Ithaca, NY, May  
 "Essentiality and Toxicity of Selenium: the RDA and RfD", 3<sup>rd</sup> Internat. Conf. Trace Elements Health & Dis, Stockholm, May  
 "Selenium Status as a Risk Factor for Colon Cancer", 5th Internat Symp. Se in Biology and Medicine, Nashville, TN, July  
 "Vitamin Tolerances of Animals", Takeda Tech. Symp., Minnesota Nutr. Conf., Minneapolis, MN, Sept  
 "Vitamin E and Selenium in the Nutrition of Poultry", Minnesota Nutr. Conf., Minneapolis, MN, Sept  
 "Contributions of Animal Products to the Vitamin Intakes of Americans", Cornell Nutr. Conf., Rochester, NY, Oct  
 "Risk Assessment of Trace Elements", Environ. Toxicology Seminar, Cornell Univ., Ithaca, NY, Oct
- 1993** "The Role of Selenium in Pancreatic Function", Field of Nutrition Seminar, Cornell Univ., Ithaca, NY, Feb.  
 "Factors Affecting the Bioavailability of Selenium", Inst. Anim. Sci., Chin. Acad. Agr. Sci., Beijing, PRC, May  
 "Factors Affecting the Bioavailability of Selenium", Shandong Prov. Acad. Med. Sci., Jilin, Shandong, PRC, May  
 "Interrelationships of Vitamin E and Selenium in Nutrition and Health", Shandong Acad. Med. Sci., Jilin, May  
 "The Nutritional Importance of Selenium", Res. Grand Rounds, Bassett Hosp., Cooperstown, NY, June  
 "Assessing the Role of Selenium in Cancer Prevention", Robert Masee Lecture, Univ. ND Med. School, Grand Forks, ND, Oct  
 "Dietary Selenium in the Etiology of Colorectal Cancer", USDA Human Nutr. Res. Center, Grand Forks, ND, Oct  
 "The Role of Selenium in the Health of the Hindgut", Cornell Nutr. Conf., Rochester, NY, Nov
- 1994** "Diet and Health: the Colon Cancer Example", Alpha Epsilon Delta, Cornell Univ., Ithaca, NY, Feb  
 "Roles of Vitamin E and Selenium in Nutrition", "From Carrots to  $\beta$ -Carotene: Agriculture and Health Implications of Increasing Plant Foods in Diets of New Yorkers" extension in-service training conf., Cornell Univ., Ithaca, NY, June  
 "Selenium in Cancer Chemoprevention", Diet and Cancer Prev. Acad. Course, NCI, Rockville, MD, Aug  
 "The Role of Selenium in Nutrition", Delmarva Poultry Industry annual mtg, Ocean City, MD, Oct  
 "Nutritional Essentiality: a Changing Paradigm", Cornell Nutr. Conf., Rochester, NY, Oct  
 "Recent Findings Concerning Anti-Cancer Activities of Selenium", Labor Protection Inst., Gejiu, Yunnan, China, Dec  
 "Selenium Nutrition of Animals and Humans", An. Sci. Res. Inst., Chin. Acad. Agr. Sci., Beijing, China, Dec  
 "Relationships of Selenium and Health", Food Industry Meeting, Chin. Acad. Agr. Sci., Beijing, China, Dec
- 1995** "What the Chicken Taught Me About Cancer", Animal Nutrition Seminar, Cornell Univ., Ithaca, NY, Jan  
 "Rationale for a Combined Iodine-Selenium Intervention", Internat. Nutr., Cornell Univ., Ithaca, NY, Feb  
 "Fighting 'Hidden Hunger' Through Sustainable, Food-Based Systems", Plant Biology Seminar, Cornell Univ., Ithaca, Feb  
 "Evaluating the Anti-Carcinogenic Potential of Selenium", Grand Rounds, Bassett Hospital, Cooperstown, NY, Mar  
 "Selenium", Cancer Prevention and Control Academic Course, National Cancer Inst., Rockville, MD, Aug  
 "Should Intakes with Beneficial Actions, Often Requiring Supplementation, be Considered for the RDAs?", Workshop on New Approaches, Endpoints and Paradigms for Recommended Dietary Allowances (RDAs) of Mineral Elements, Grand Forks Human Nutrition Research Center, Sept  
 "Emphasizing Fruits and Vegetables in American Diets: Implications for Vitamin and Mineral Intakes", Cornell Nutr. Conf., Rochester, NY, Oct  
 "Potential for Reducing Cancer Risk in Older Americans by Nutritional Supplementation with Selenium", Research Grand Rounds, VA Med. Center, Minneapolis, Sept  
 "Purpose of the Workshop", Cornell/Thrasher Workshop "Food-Based Approaches to Preventing Micronutrient Malnutrition", Salt Lake City Nov

- "Food-Based Approaches to Preventing Micronutrient Malnutrition: Outcomes of an International Workshop", Cornell Internat. Inst. Food, Agr. Devel. Adv. Comm. Meeting, Ithaca, NY, Nov
- "Food-Based Approaches to Preventing Micronutrient Malnutrition: Outcomes of an International Workshop", Field of Nutrition, Cornell Univ., Ithaca, NY, Dec
- 1996**
- "Making Nutrition Trans-Disciplinary", Interdepartmental Nutrition Program, Univ. Arizona, Tucson, AZ, Feb
  - "Selenium Reduces Cancer Risk", Field of Nutrition, Cornell Univ., Ithaca, NY, Feb
  - "Developing Sources of Selenium for Cancer Chemoprevention", Boyce Thompson Inst. Bd. of Directors, New York, Feb
  - "Cancer Chemopreventive Effects of Selenium Supplements", Field of Animal Sci., Cornell Univ., Ithaca, NY, Apr
  - "Evidence for Cancer Chemopreventive Effects of Nutritional Supplements of Selenium", TEMA, Banff, Canada, May
  - "Importance of Food-Systems Thinking for Sustainable Solutions to Malnutrition", Univ. Sidney, Sidney, Australia, June
  - "Role of Selenium and Vitamin E in Cancer Chemoprevention", Univ. of Sydney, Sydney, Australia, June
  - "Policy Implications of Beneficial Actions of Supra-nutritional Intakes of Nutrients", Univ. Sydney, Sydney, Australia, June
  - "Risks and Benefits of Selenium", National Food Authority Seminar, Canberra, Australia, June
  - "Selenium", Cancer Prevention and Control Academic Course, Nat. Cancer Inst., Rockville, MD, Aug
  - "Cancer Chemoprevention by Supplements of Selenium - Implications to Food Engineering", Chin Acad. Agr. Sci., Beijing, Aug
  - "Food-Based Approaches to Preventing Nutritional Selenium Deficiency in China", Pang Tai Mills, Inc., Qinhuangdao, China, Aug
  - "A New Approach to Considering Dietary Needs for Selenium", wkshp on Selenium Allowances, Beijing, Aug
  - "Clinical Evidence for Cancer Chemopreventive Effects of Nutritional Supplements of Selenium", 6<sup>th</sup> Internat. Symp. Selenium in Biol. Med., Beijing, Aug
  - "Implications to Vegetable Production of Anti-Cancer Roles of Selenium", Dept Fruit & Veg. Sci., Cornell Univ., Ithaca, NY, Sept
  - "Focusing Food Systems to Improve Health", Dept Food Sci., Cornell Univ., Ithaca, NY, Oct
  - "Can Selenium Reduce Cancer Risk?", Nutrition Seminar, Penn. State Univ., State College, PA, Oct
  - "Thinking in Terms of Food Systems", Cornell Nutr. Conf., Rochester, NY, Oct
  - "What Does 'Nutritional Essentiality' Really Mean?" Pet Food Inst., Chicago, IL, Nov
- 1997**
- "Selenium in Your Diet", Rotary Club, Lansing, NY, Jan
  - "Findings Concerning Colon Cancer-Protection by Selenium", Bayer Pharmaceuticals, New Haven, CT, Feb
  - "Questions Concerning the Potential of Food-Systems Approaches to Improve Health", AAAS Symp. "Creating a Healthful Food System: Linking Agriculture to Human Needs", Seattle, WA, Feb
  - "Antioxidant Nutrients and Cardiovascular Disease Risk", Oneonta Heart Conf., Oneonta, NY, Mar
  - "Taking Systems Approaches to Diet and Health", Tufts Food Systems Workshop, Boston, Mass, Mar
  - "Opening Remarks", 3<sup>rd</sup> Dresden Symp. on Selenium, Dresden, Germany, May
  - "Prevention of Cancer with Selenium Supplementation", 3rd Dresden Symp., Dresden, Germany, May
  - "Selenium and Cancer: Cornell's Role in the Discovery and Development of a Cancer Preventive Nutrient", Kinzelberg Hall Dedication, Cornell Univ., Ithaca, NY, June
  - "Nutritional Outcomes of Rice-Wheat Based Agriculture", Bangladesh Agr. Res. Center, Joydipur, Bangladesh, June
  - "Opportunities Offered by Agriculture to Improve Nutritional Status", Rice-Wheat Consortium, Pokhara, Nepal, June
  - "Identification of Selenosis", Punjab Agr. Univ., Ludhiana, India, June
  - "Selenium", Cancer Prevention and Control Acad. Course, Nat. Cancer Inst., Rockville, MD, July
  - "Selenium and Cancer Prevention", Council on Responsible Nutrition, Dana Point, CA, Sept.
  - "Considering Health Claims for Selenium: Risks and Benefits", Environ. Tox. Seminar, Cornell Univ. Sept
  - "Selenium in Nutrition and Health", Dept Nutrition, Univ. of Connecticut, Storrs, CT, Oct
  - "Addressing Diet-Related Health Problems of Americans", symposium "Improving Food Systems", Am. Societies of Agronomy, Crop Sci. and Soil Sci., Anaheim, CA, Oct
  - "Cancer Prevention with Selenium", symposium on Selenium in Medicine, Baden-Baden, Germany, Nov.
  - "Food-Based Strategies to Increase Micronutrient Intake", symposium on "Other Food-Based Strategies Based on Increasing the Intake of Micronutrients: Beyond Salt & Sugar Fortific.", XII Congreso Lantinamericano de Nutrición, Guatemala City, Nov
- 1998**
- "Opportunities in International Nutrition", Cornell Univ. Assoc. of Internat. Agr. Students, Ithaca, NY, Feb
  - "Considering Nutrient Needs: Adequate vs. Optimum", Pet Food Forum, Chicago, Apr
  - "Harnessing the Power of Food Systems to Improve Health", Cornell Food Sci. Adv. Board, Ithaca, NY, April
  - "Role of Selenium in Anti-Carcinogenesis", 5<sup>th</sup> Internat. Conf. on Metal Ions in Biology & Health, Munich, Germany, May
  - "Cancer Prevention with Selenium", German Cancer Soc., Berlin, Germany, June
  - "Role of Selenium in Cancer Prevention", US-Russian workshop on selenium, Tyumen, Russia, June
  - "Selenium", Cancer Prevention and Control Acad. Course, Nat. Cancer Inst., Rockville, MD, July
  - "Cancer Risk Reduction by Selenium", Univ. Joseph Fourier, Grenoble, France, Sept
  - "Food-Based Approaches to Preventing Micronutrient Deficiencies" Internat. Soc. Trace Elem. Res. Humans, Lyon, France, Sept
  - "Efficacy of Selenium in Cancer Prevention", 5<sup>th</sup> Internat. Soc. Trace Element Res. in Humans, Lyon, France, Sept
  - "Recent Findings about Selenium in Health Maintenance", Cornell Nutr. Conf., Rochester, NY, Oct
  - "Re-Defining Essentiality: Changing the Nutrition Paradigm", Food Sci., Cornell Univ., Ithaca, NY, Dec
  - "Re-Defining Essentiality: Changing the Nutrition Paradigm", Hill's Sci. Center, Topeka, Kansas, Dec.
- 1999**
- "The Biology of Rickets", Bangladesh Rickets Consortium 2<sup>nd</sup> Meeting, Dhaka, Bangladesh, Jan

- "The role of selenium in cancer prevention", US Plant, Soil and Nutrition Lab., Ithaca New York, Feb,  
 "The role of selenium in cancer prevention", Dept Food & Nutr., Purdue Univ., West Lafayette, Indiana, Mar  
 "Micronutrient Needs", ASNS Forum on Micronutrients, Exp. Biology '99, Washington, DC, Apr  
 "Using the food system concept to link agriculture and health agendas", Nat. Planning Wkshp, Gov't of Indonesia, Jakarta, May  
 "Chemopreventive mechanisms of selenium", 4<sup>th</sup> Dresden Selenium Symposium, Dresden, Germany, May  
 "The role of selenium in cancer prevention", Nordic Nutr. Conf., Helsinki, Finland, June  
 "Relationships of Micronutrients and Cancer Risk", Univ. Costa Rica, San José, Costa Rica, July  
 "Relationships of Micronutrients and Cardiovascular Disease Risk", Univ. Costa Rica, San José, Costa Rica, July  
 "The RDA and the Nutritional Essentiality Paradigm", Univ. Costa Rica, San José, Costa Rica, July  
 "Food-Based Approaches to Improving Micronutrient Intakes", Escuela Nutricion Humana, Univ. Costa Rica, San José, July  
 "Selenium and Cancer Prevention" Cancer Prevention and Control Acad. Course, Nat. Cancer Inst., Rockville, MD, July  
 "Agriculture as an Implement for Improving Child Survival: the Rickets in Bangladesh Case", USAID, Washington, DC, July  
 "Role of Selenium in Human Health", Tian Ma Group, Tianjin, China, Aug  
 "Agriculture as a Means of Improving Health", Planning Wkshp for Chin. Agr. Dev., Yangzhou, China, Aug  
 "Considering the Mechanisms of Cancer Prevention by Selenium", Am. Inst. Cancer Res., Washington, DC, Sept  
 "An Element in Cancer Prevention", Grand Rounds, Wilson Hospital, Binghamton, NY, Sept  
 "Food Systems Approaches to Improved Health", 7<sup>th</sup> Gatlinburg Symp., Knoxville, Tenn., Oct  
 "Preventing Rickets by Food-Based Approaches: Inventing a New Paradigm", Cornell Univ., Ithaca, NY, Nov  
 "Chemopreventive Mechanisms of Selenium", Selenium Symp., Jena, Germany, Oct  
 "Food-Based Approaches to Improving Micronutrient Malnutrition: Selenium", 2<sup>nd</sup> Int. Conf. Food Factors, Kyoto, Japan, Dec
- 2000** "An Element of Cancer Prevention", Med. Grand Rounds, Wilson Hospital, Binghamton, NY, Feb  
 "Selenium in Cancer Prevention", Med. Grand Rounds, Louisiana State Univ. Med. School, New Orleans, LA, Feb  
 "Vitamin D, Calcium and Rickets in the Tropics", Nutri. Problems in Developing Nations, Cornell Univ., Ithaca, Mar  
 "Selenium in Cancer Prevention", Univ. Illinois-Chicago, Chicago, June  
 "An Analysis of Cancer Prevention by Selenium" 7<sup>th</sup> Internat. Symp. on Selenium in Biol. and Med., Venice, Italy, Oct  
 "Roles of Selenium and Vitamin E in the Nutrition of Poultry and Swine", Rank Prize Funds Symp., Grasmere, England, Nov  
 "An International Perspective on Rickets", Internat. Workshop on Agr. Approaches to Preventable Disability: the Case of Rickets in Bangladesh, Dhaka, Nov
- 2001** "Food Systems Approaches to Preventing Micronutrient Malnutrition in the Developing World", Workshop on Plant Breeding Strategies to Address Micronutrient Malnutrition, Centro Internac. Agric. Tropica, Cali, Colombia, Jan  
 "A Problem-Based Approach to Addressing Micronutrient Needs by Plant Breeding", Follow-up Workshop on Plant Breeding Strategies to Address Micronutrient Malnutrition, Centro Internac. Agric. Tropica, Cali, Colombia, Mar  
 "All That Glitters May Not Be Gold: Case Study in Biotechnology for Improved Micronutrient Nutrition", Cornell Univ., Ithaca, NY, Apr  
 "Arsenic Impact on the Food Chain on Human Health", UNICEF Expert Grp on Arsenic, Nutr & Food Chain, Dhaka, May  
 "Relevant Science: Perspectives on Mineral Research and the GFHNRC", Grand Forks HNRC, Grand Forks, ND, Aug  
 "Needs for Calcium-Rich Foods in Developing Countries", Cornell Nutr. Conf., Rochester, NY, Oct.  
 "Role of Selenium in Prostate Health", University of Guelph, Guelph, Ontario, Nov  
 "Improving Plants for Improved Human Health", Plant Breeding Seminar, Cornell Univ., Ithaca, Nov.
- 2002** "Role of Selenium in Cancer Prevention" School of Medicine, University of North Dakota, Grand Forks, Jan.  
 "Rediscovering Rickets", University of North Dakota Sigma Xi, Grand Forks, Feb.  
 "Role of Selenium in Cancer Prevention" American Academy of Dermatology, Annual Meeting, New Orleans, Febr.  
 "Bridging the Agriculture-Health Gap", ARS Wkshp on Nutri. Enhancement of Plants, Animals & Foods, Houston, May  
 "Progress in Rickets Prevention Research", USAID Mission, Dhaka, Bangladesh, June  
 "Toward a Healthy Agriculture", North Dakota Dept. of Agriculture, Bismarck, Jul.  
 "Opportunities for Healthy Eating", Healthy North Dakota Summit, Bismarck, Aug.  
 "Addressing Arsenicosis in Bangladesh", Internat. Soc. for Trace Element Res. in Humans, Quebec, Sept.  
 "Preventing Cancer with Selenium", Plenary lecture, Internat. Soc. for Trace Element Res. in Humans, Quebec, Sept.  
 "Role of Selenium in Cancer Prevention", Dept. Animal and Range Sciences, North Dakota State Univ., Fargo, Sept.  
 "This is the Grand Forks Human Nutrition Research Center", Grand Forks City Council, Grand Forks, ND, Oct.  
 "Re-emergence of Rickets", Greater Grand Forks Dietetics Association, Grand Forks, ND, Nov.  
 "The Nutrition Link to Agriculture at the Grand Forks Human Nutrition Research Center", ND Agr Coalition, Bismarck Nov.  
 "Role of Selenium in Cancer Prevention", Univ. of Manitoba, Winnipeg, MB, Nov.
- 2003** "Efficacy of a calcium supplement in preventing rickets in Bangladesh", Calcium Bd., GlaxoSmithKline, Morristown, NJ, Mar  
 "Contributions of animal nutrition to human health: the selenium story", Maryland Nutr. Conf., College Park, Mar  
 "The Nutrition Link to Agriculture", NDSU Cooperative Extension In-Service, Fargo, Apr.  
 "This is the Grand Forks Human Nutrition Research Center", North Dakota State Univ. Coop. Exten. Annual Conf., Fargo, Apr  
 "Bridging the Ag-Health Gap", National Agricultural Marketing Assoc., Grand Forks, ND., Apr.  
 "Opportunities for a Healthy Foods Initiative", National Program Staff, ARS, USDA, Beltsville, MD, May

- “Food and Health: Role of the Grand Forks Human Nutrition Res. Center”, Optimists Club, Grand Forks, ND., June  
 “Bridging the Ag-Health Gap”, Midwest section, National Agriculture Directors’ Assoc., Grand Forks, ND., July  
 “Capturing Health & Economic Opportunities for the Dakotas: Sorting Grains by Selenium Content”, UND, Grand Forks, Aug  
 “New Progress in Trace Elements: Born and Selenium”, Council for Responsible Nutrition, Tucson, Sept.  
 “Improved crop nutritive value: A panacea for world hunger?” Keynote address, Amer. Soc. Hort. Sci., Providence, R.I. Oct.  
 “Opportunities for Developing Healthy Foods”, Kellogg Inst. for Food & Nutrition Res., Battle Creek, MI, Oct.  
 “Vitamin D: a Global Perspective”, NIH conf. Vitamin D and Health in the 21<sup>st</sup> Century: Bone & Beyond, Bethesda, MD, Oct.  
 “Essential Minerals in Water”, WHO working group on desalinization, Rome, Nov.  
 “Mineral Elements Related to Cardiovascular Health”, WHO working group on desalinization, Rome, Nov.  
 “This is the Grand Forks Human Nutrition Research Center”, Kiwanis Club, Grand Forks, ND, Dec.
- 2004**  
 “A Dakot Diet”, Marketplace of Ideas, Grand Forks, ND, Jan  
 “Health: An Attribute of North Dakota Crops?”, Northwest Farm Managers Assoc., Fargo, ND, Feb  
 “Scientific Evidence on Selenium and Cancer”, Amer. Soc. Nutritional Sci. Symposium “Nutrient Disease Relationships: Closing the Scientific Knowledge Gap”, Washington, DC, Apr.  
 “Selenium in the American Food System: Implications for Cancer Prevention”, Amer. Soc. Nutr. Sci. Symp., Wash., DC, Apr  
 “Nutritional Roles of Minerals”, AFIP Short-Course in Medical Geology, Budapest, Hungary, May  
 “Role of Selenium in Cancer Prevention”, Opening Address, 8<sup>th</sup> Internat. Symp. Metal Ions in Biol. and Med., Budapest, May  
 “Phytonutrients, Foods and Health”, USDA-Chinese Ministry of Science and Technol. Planning wkshp, Los Angeles, CA, July  
 “Role of Selenium in Cancer Prevention”, Medical Grand Rounds, Altru Health System, Grand Forks, Oct  
 “Opening Remarks”, Hunger in the Heartland Conference, Grand Forks, Oct  
 “Role of Selenium in Cancer Prevention”, Midwest Selenium Conference, Grand Forks, Nov.  
 “Safety of High-Selenium Foods”, Midwest Selenium Conference, Grand Forks, Nov.  
 “Considering Chemical Speciation in Assessing Trace Element Bioavailability: the Case of Selenium”, Internat. Soc. Trace Element Research in Humans, Bangkok, Nov.
- 2005**  
 “Developing high-selenium foods”, Dept. of Animal and Range Sciences, North Dakota State University, Fargo, ND, Jan  
 “Considerations from Selenium Metabolism: Towards Informed Assessment of Selenium Status”, Dept. of Physiology, Pharmacology and Therapeutics, Univ. North Dakota School of Medicine and Health Sci., Grand Forks, ND, Jan  
 “A Dakota Diet”, Research Day, Great Plains Research Laboratory, Mandan, ND, Feb  
 “The Role of Water as a Source of Essential Minerals”, Water Quality Association, Las Vegas, NV, Mar  
 “Assessment of Selenium Status”, North Dakota Medical Technologists Assoc., Grand Forks, ND, April  
 “Dakota Diet – an Approach to Marketing ‘Health’ and ‘Local’”, NDSU Cooperative Extension, Minot, ND, May  
 “This is the Grand Forks Human Nutrition Research Center”, Grand Forks Retired Teachers Assoc., Grand Forks, ND, May  
 “Health as a Marketing Strategy”, Assoc. of Midwest Agricultural Economists, Las Vegas, NV, Jun  
 “Importance of Selenium to Human Nutrition”, Twenty Years of Selenium Fertilization: Workshop, Helsinki, Sept.  
 “Assessment of Iron Status”, Contributors to Neonatal and Infant Morbidity and Mortality Workshop, Chandigarh, India, Sept.  
 “Health Roles of Foods Produced in North Dakota”, US Dry Bean Council, Fargo, ND, Oct.  
 “Opportunities for Improving Health through Enhancing Mineral Contents of Foods”, Yara workshop, Oslo, Oct.  
 “Marketing Health: a Dakota Diet”, Bismarck-Mandan Dietetic Assoc., Bismarck, ND, Oct.  
 “Healthful Eating Tips for Older, Active Men”, Grand Forks Men’s Club, Grand Forks, ND, Oct.  
 “Fish as a Source of Selenium”, Univ. Maryland Center for Food, Nutr. and Agr. Policy Roundtable, Washington, DC, Nov.
- 2006**  
 “Dry Beans and the Trend in Whole Foods”, Bean Day 2006, Northharvest Bean Growers Assn., Fargo, ND, Jan  
 “Selenium Studies”, East Grand Forks Senior Citizen Center, East Grand Forks, MN, Feb.  
 “The Role of Selenium in Reducing Cancer Risk”, Nutrition Seminar, South Dakota State University, Brookings, SD, Mar  
 “Role of the USDA in Researching Questions of Diet and Health”, Grand Forks Rotary Club, Grand Forks, April  
 “Indications of Calcium and Magnesium Deficiency in Populations”, WHO/ILSI Conference on Calcium and Magnesium in Cardiovascular Health, Baltimore, April  
 “Determining Healthful Intakes of Selenium”, 9<sup>th</sup> Internat. Sympos. on Metal Ions in Biology and Medicine, Lisbon, May  
 “Role of Selenium in Health and Disease”, Internat. Symposium on Selenium in Health and Disease, Ankara, Turkey, Oct  
 “Role of Selenium in Cancer Prevention”, Internat. Symp. on Selenium in Health and Disease, Ankara, Turkey, Oct
- 2007**  
 “Opportunities for biofortified crops for improving nutritional status of Americans and overseas populations”, ARS Harvest Plus mtg, Beltsville, MD, Jan  
 “Potential of high-selenium foods in cancer prevention”, Healthy and Functional Foods Conference, Hettinger, ND, Jan  
 “Opportunities for high-selenium wheat in cancer prevention”, Wheat Quality Council, Kansas City, MO, Feb  
 “Are there Risks Associated with Supranutritional Selenium?”, Congress on Essential Minerals, Stuttgart, Sept.  
 “Addressing National Needs in Human Nutrition: the GFHNRC Research Program”, Univ. North Dakota, Grand Forks, Oct.
- 2008**  
 “Considering Selenium in Three Dimensions: Nutritional, Anti-Cancer and Toxicological”, Univ. Saskatwan, Saskatoon, Mar  
 “Implications of Biofortification for Industrialized Countries”, planning workshop, HarvestPlus, IFPRI, Washington, Mar  
 “Role of Selenium in Cancer Prevention”, VA, Fargo, May  
 “Obesity Prevention Research at the Grand Forks Human Nutrition Research Center”, Healthy North Dakota Planning Group, Bismarck, ND, Sept.



- Combs, G.F., Jr** and M.L. Scott. 1979. The selenium needs of laying and breeding hens. *Poultry Sci.* 58:871-884.
- Combs, G.F., Jr.**, A.H. Parsons and M.B. Ross. 1979. Calcium homeostasis in pullets of two lines selected for differences in eggshell strength. *Poultry Sci.* 58:1250-1256.
- Combs, G.F., Jr** and J.M. Regenstein. 1980. Influence of selenium, vitamin E, and ethoxyquin on lipid peroxidation in muscle tissues from fowl during low temperature storage. *Poultry Sci.* 59:347-351.
- Bunk, M.J. and **G.F. Combs, Jr.** 1980. Effect of selenium on appetite in the selenium-deficient chick. *J. Nutr.* 110:743-749.
- Peterson, F.J., R.P. Mason, J.L. Holtzman and **G.F. Combs, Jr.** 1980. The effect of selenium and vitamin E deficiency on the toxicity of nitrofurantoin in the chick. In: *Microsomes, Drug Oxidation and Chemical Carcinogenesis*, eds. M.J. Coon, A.H. Conney, R.W. Estabrook, H.V. Gelboin, J.R. Gillette & P.J. O'Brien, Academic Press, New York, pp 872-876.
- Combs, G.F., Jr.**, S.A. Barrows and F.N. Swader. 1980. Biological availability of selenium in corn grain produced on soil amended with fly ash. *J. Agr. Food Chem.* 28:406-409.
- Combs, G.F., Jr** and J.M. Regenstein. 1980. Influence of selenium, vitamin E and ethoxyquin on lipid peroxidation in muscle tissues from fowl during low temperature storage. *Poultry Sci.* 59:347-351.
- Poston, H.A., and **G.F. Combs, Jr.** 1980. Nutritional implications of tryptophan catabolizing enzymes in several species of trout and salmon. *Proc. Soc. Exp. Biol. Med.* 163:452-454.
- Combs, G.F., Jr.**, K.T. Mandisodza, W.H. Gutenmann and D.J. Lisk. 1981. Utilization of selenium in fly ash and in white sweet clover grown on fly ash by the chick. *J. Agric. & Food Chem.* 29:149-152.
- Alenier, J.C. and **G.F. Combs, Jr.** 1981. Effects on feed palatability of ingredients believed to contain unidentified growth factors for poultry. *Poultry Sci.* 60:215-224.
- Kingsley, P.B. and **G.F. Combs, Jr.** 1981. Vitamin E activity of  $\alpha$ -tocopherol side chain analogs in selenium-deficient chicks. *Proc. Soc. Exp. Biol. Med.* 166:1-5.
- Coffin, J.L. and **G.F. Combs, Jr.** 1981. Impaired vitamin E status of chicks fed T-2 toxin. *Poultry Sci.* 60:385-392.
- Bunk, J.J. and G.F. Combs, Jr. 1981. Evidence for an impairment in the conversion of methionine to cysteine in the selenium-deficient chick. *Proc. Soc. Exp. Biol. Med.* 167:87-93.
- Pilch, S.M. and **G.F. Combs, Jr.** 1981. Effects of dietary vitamin E and selenium on the mixed-function oxygenase system of male and female chick. *Comp. Biochem. Physiol.* 69C:331-335.
- Parsons, A.H. and **G.F. Combs, Jr.** 1981. Blood ionized calcium cycles in the chicken. *Poultry Sci.* 60:1520-24.
- Bunk, M.J. and G.F. Combs, Jr. 1981. Relationship of selenium-dependent glutathione peroxidase activity and nutritional pancreatic atrophy in selenium-deficient chicks. *J. Nutr.* 111:1611-1620.
- Combs, G.F., Jr.** 1981. Influences of dietary vitamin E and selenium on the oxidant defense system of the chick. *Poult. Sci.* 60:2098-2105
- Dean, W.F. and **G.F. Combs, Jr.** 1981. Influence of dietary selenium on performance, tissue selenium content, and plasma concentrations of selenium-dependent glutathione peroxidase, vitamin E, and ascorbic acid in ducklings. *Poultry Sci.* 60:2655-2663.
- Marsh, J.A., R.R. Dietert and **G.F. Combs, Jr.** 1981. Influence of dietary selenium and vitamin E on the humoral immune response of the chick. *Proc. Soc. Exp. Biol. Med.* 166:228-236.
- Combs, G.F., Jr.** and M.J. Bunk. 1981. The role of selenium in pancreatic function. *in Selenium in Biology and Medicine* (Spallholz, J.E., J.L. Martin and H.E. Ganther, eds.), AVI Publ. Co., Westport, CT, pp. 70-85.
- Marsh, J.A., **G.F. Combs, Jr.** and R.R. Dietert. 1981. Effects of selenium and vitamin E on development of immunity of the chick. *In Selenium in Biology and Medicine* (Spallholz, J., J. Martin & H.E. Ganther, eds.), AVI Publ. Co., Westport, CT, pp. 358-365.
- Van Toledo B., A. Parsons and **G.F. Combs, Jr.** 1982. Role of ultra-structure in determining eggshell strength. *Poultry Sci.* 61:569-572.
- Poston, H.A., J.L. Coffin and **G.F. Combs, Jr.** 1982. Biological effects of dietary T-2 toxin on rainbow trout, *Salmo gairdneri*. *Aquatic Toxic.* 2:79-88.
- El-Begearmi, M.M. and **G.F. Combs, Jr.** 1982. Dietary effects of selenite toxicity in the chick. *Poultry Sci.* 61:770-6.
- Chen, J., M. Goetchius, **G.F. Combs, Jr.** and T.C. Campbell. 1982. Effects of dietary selenium and vitamin E on covalent binding of aflatoxin to chick liver cell macromolecules. *J. Nutr.* 112:350-355.
- Chen, J., M.P. Goetchius, T.C. Campbell and **G.F. Combs, Jr.** 1982. Effects of dietary selenium and vitamin E on hepatic mixed-function oxidase activities and *in vivo* covalent binding of aflatoxin B<sub>1</sub> in rats. *J. Nutr.* 112:324-331.
- Peterson, F.J., **G.F. Combs, Jr.**, J.L. Holtzman and R.P. Mason. 1982. Metabolic activation of oxygen by nitrofurantoin in the young chick. *Toxic. & Applied Pharm.* 65:162-169.
- LaVorgna, M.W. and **G.F. Combs, Jr.** 1983. Evidence of a hereditary factor affecting the chick's response to uncomplicated selenium deficiency. *Poultry Sci.* 62:164-168.
- Combs, G.F., Jr.** and F. Peterson. 1983. Protection against acute paraquat toxicity by dietary selenium in the chick. *J. Nutr.* 113:538-545.
- Bruckner, G., J. Infanté, **G.F. Combs, Jr.** and J.E. Kinsella. 1983. Effects of vitamin E and aspirin on the incidence of encephalomalacia, fatty acid status on serum thromboxane levels in chicks. *J. Nutr.* 113:1885-1890.
- Whitacre, M.E. and **G.F. Combs, Jr.** 1983. Selenium and mitochondrial integrity in the pancreas of the chick. *J. Nutr.* 113:1972-1983.
- Zhou, Y.P. and **G.F. Combs, Jr.** 1983. Effects of dietary protein level and level of feed intake on the apparent bioavailability of selenium for the chick. *Acta Agric. Univ. Pekinensis.* 9:75-88.
- Combs, G.F., Jr.**, C.H. Liu, Z.H. Liu and Q. Su. 1984. Uncomplicated selenium deficiency produced in chicks fed a corn-soy-based diet. *J. Nutr.* 114:964-976.
- Van Toledo, B. and **G.F. Combs, Jr.** 1984. Fluorosis in the laying hen. *Poultry Sci.* 63:1543-1552.
- Combs, S. and **G.F. Combs, Jr.** 1985. Varietal differences in the vitamin E content of corn. *J. Agric. Food Chem.* 33:815-817.

- Combs, G.F., Jr.** and J.M. Saroka. 1985. Appetite as a factor modifying the chick's response to analogs and isomers of methionine. *Taiwan Livestock Res.* 18:69-74.
- Mercurio, S.D. and **G.F. Combs, Jr.** 1985. Drug-induced changes in selenium-dependent glutathione peroxidase activity in the chick. *J. Nutr.* 115:1459-1470.
- Saroka, J.M. and **G.F. Combs, Jr.** 1986. The lack of effect of a pyridoxine deficiency on the utilization of the hydroxyl analogue of methionine by the chick. *Poultry Sci.* 65:764-768.
- Saroka, J.M. and **G.F. Combs, Jr.** 1986. Studies of the renal excretion of the hydroxyl analogue of methionine by the chick. *Poultry Sci.* 65:1375-1382.
- Mercurio, S.D. and **G.F. Combs, Jr.** 1986. A synthetic seleno-organic compound with glutathione peroxidase-like activity in the chick. *Biochem. Pharmacol.* 35:4505-4509.
- Mercurio, S.D. and **G.F. Combs, Jr.** 1986. Selenium-dependent glutathione peroxidase inhibitors increase toxicity of pro-oxidant compounds. *J. Nutr.* 116:1726-1734.
- Cunningham, D.L. and **G.F. Combs, Jr.** 1986. Response to divergent selection for early growth rate of chickens fed a selenium-deficient diet. *Poultry Sci.* 66:209-214.
- Marsh, J.A., **G.F. Combs, Jr.**, M.E. Whitacre and R.R. Dietert. 1986. Effect of selenium and vitamin E dietary deficiencies on chick lymphoid organ development. *Proc. Soc. Exp. Biol. Med.* 182:425-436.
- Combs, G.F., Jr.**, Q. Su, C.H. Liu and S. B. Combs. 1986. Effect of dietary selenium, copper and zinc on tissue trace mineral levels in chicks. *Biol. Trace Elem. Res.* 11:51-64.
- Whitacre, M.E., **G.F. Combs, Jr.**, B. Combs and R.S. Parker. 1987. Influence of dietary vitamin E deficiencies in nutritional pancreatic atrophy in selenium-deficient chicks. *J. Nutr.* 117:460-467.
- Marsh, J.A., R.R. Dietert and **G.F. Combs, Jr.** 1987. Effect of dietary selenium and vitamin E deficiencies in the chicken on con A induced splenocyte proliferation. *Avian Immunol.* 238:333-345.
- Mercurio, S.D. and **G.F. Combs, Jr.** 1987. Mercaptans decrease selenium-dependent glutathione peroxidase activity in the chick. *J. Nutr.* 117:880-885.
- Cupp, M.S., **G.F. Combs, Jr.**, and R.A. Corradino. 1987. Influence of ascorbic acid on the activity of glutathione peroxidase in the cultured chick duodenum. *in Selenium in Biology and Medicine, Proceedings of the Third International Symposium* (Combs, G.F., Jr., J. Spallholz, O. Levander and J. Oldfield, eds.), AVI Publ., Westport, CT, pp. 360-366.
- Combs, G.F., Jr.** 1987. Factors affecting the bioavailability of dietary selenium in the chick. *in Selenium in Biology and Medicine*, (Combs, G.F., Jr., J.E. Spallholz, O.A. Levander and J.E. Oldfield, eds.), AVI Publ. Co., Westport, CT, pp. 413-418.
- Root, E.J. and **G.F. Combs, Jr.** 1988. Disruption of endoplasmic reticulum is the primary ultrastructural lesion in the selenium-deficient chick. *Proc. Soc. Exp. Biol. Med.* 187:513-521.
- Lu, J. and **G.F. Combs, Jr.** 1988. Effect of dietary zinc on the pancreatic exocrine function of the chick. *J. Nutr.* 118:681-689.
- Kim, Y. and **G.F. Combs, Jr.** 1988. Measurement of chick plasma ceruloplasmin using  $\alpha$ -dianisidine as substrate. *Nutr. Res.* 8:379-87.
- Lu, J. and **G.F. Combs, Jr.** 1988. Excess dietary zinc increases tissue  $\alpha$ -tocopherol in chicks. *J. Nutr.* 118: 1349-59.
- Cupp, M.S., **G.F. Combs, Jr.** and R.A. Corradino. 1988. Ascorbate interacts with selenium to increase glutathione peroxidase activity in selenium-deficient chick duodena cultured in vitro. *Biol. Trace Elem. Res.* 20:87-94.
- Godfried, S.L., **G.F. Combs, Jr.**, J.M. Saroka and L.A. Dillingham. 1989. Potentiation of atherosclerotic lesions in rabbits by a high dietary level of vitamin E. *Brit. J. Nutr.* 61:607-617.
- Lu, J.X., **G.F. Combs, Jr.** and J.C. Fleet. 1990. Time-course studies of pancreatic exocrine damage induced by excess dietary zinc in the chick. *J. Nutr.* 120:389-397.
- Munshi, C.B., **G.F. Combs, Jr.** and N.I. Mondy. 1990. Effect of selenium on the nitrogenous constituents of the potato. *J. Agr. Food Chem.* 38:2000-2002.
- Dietert, R.R., **G.F. Combs, Jr.**, H.K. Lin, J.V. Puzzi, K.A. Golemboski and J.A. Marsh. Impact of combined vitamin E and selenium deficiency on chicken macrophage function. *Ann.N.Y. Acad. Sci.* 587:281-2.
- McShane, L.M., L. Clark, **G.F. Combs, Jr.** and B. Turnbull. 1991. Reporting the accuracy of biochemical measurements for epidemiologic and nutrition studies. *Am. J. Clin. Nutr.* 53:1354-1360.
- Petersson, K.H., H.F. Hintz, H.F. Schriver and **G.F. Combs, Jr.** 1991. The effect of vitamin E on membrane integrity during submaximal exercise. *Equine Exer. Physiol.* 3:315-322.
- Burke, K.E., **G.F. Combs, Jr.**, E. Gross, K. Bhuyan and H.Abu-Libdeh. 1992. The effects of topical and oral L-seleno-methionine on pigmentation and skin cancer induced by ultraviolet irradiation. *Nutr. Cancer* 17:123-37.
- Lu, J.X. and **G.F. Combs, Jr.** 1992. Penicillamine: pharmacokinetics and differential effects on zinc and copper status in chicks. *J. Nutr.* 122:355-362.
- Burke, K.E., R.G. Bedford, **G.F. Combs, Jr.**, I.W. French and D.R. Skeffington. 1992. The effect of topical L-Selenomethionine on minimal erythema dose of ultraviolet irradiation in humans. *Photodermatol. Photoimmunol. Photomed.* 9:1-6.
- McShane, L.M., L. Clark, **G.F. Combs, Jr.** and B. Turnbull. 1992. Application of variance components methods to laboratory quality control for biochemical measurements. *Proc. Biopharm. Sect. Am. Stat. Ass.* pp. 250-6.
- Clark, L.C., L.J. Hixon, **G.F. Combs, Jr.**, N. Patel, M. Reid, R.E. Sampliner, 1993. Plasma selenium concentrations predict the rate of colorectal neoplastic polyps. *Cancer Epidemiol. Biomarkers Prev.* 2:41-46.
- Kim, Y.S., and **G.F. Combs, Jr.** 1993. Effects of dietary selenium and vitamin E on glutathione concentrations and glutathione S-transferase activities in chick liver and plasma. *Nutr. Res.* 13:455-463.

- Combs, G.F., Jr.** 1993. Essentiality and Toxicity of Selenium: an Overview of the RDA and RfD. *Scand. J. Work, Environ. Health* 19 (suppl. 1):119-121.
- Chang, W.P., J.S.H. Hom, R.R. Dietert, **G.F. Combs, Jr.** and J.A. Marsh. 1994. Effect of dietary vitamin E and selenium deficiency on chicken splenocyte proliferation and cell surface marker expression. *Immunopharm. Immunotox.* 16:203-223.
- Combs, Jr., G.F.**, C. Garbisu, B.C. Yee, A. Yee, D.E. Carlson, N.R. Smith, A.C. Magyarosy, T. Leighton and B.B. Buchanan. 1996. Bioavailability of Selenium Accumulated by Selenite-Reducing Bacteria. *Biol. Trace Elem. Res.* 52:1-19.
- Fisher, J.P., J.D. Fitzsimmons, **G.F. Combs, Jr.**, and J.M. Spitsbergen. 1996. Naturally occurring thiamin deficiency causing reproductive failure in wild salmonid fishes in the Great Lakes basin. *Trans. Am. Fisheries Soc.* 125:167-178.
- Clark, L., **G. Combs, Jr.**, B. Turnbull, E. Slate, D. Alberts, D. Abele, R. Allison, J. Bradshaw, D. Chalker, J. Chow, D. Curtis, J. Dalen, L. Davis, R. Deal, M. Dellasega, R. Glover, G. Graham, E. Gross, J. Hendrix, J. Herlong, F. Knight, A. Krongrad, J. Leshner, J. Moore, K. Park, J. Rice, A. Rogers, B. Sanders, B. Schurman, C. Smith, E. Smith, J. Taylor and J. Woodward. 1996. The Nutritional Prevention of Cancer with Selenium 1983-1993: a Randomized Clinical Trial. *J. Am. Med. Assoc.* 276:1957-1963.
- Kim, J. and **G.F. Combs, Jr.** 1997. Effects of Selenium on Colonic Fermentation in the Rat. *Biol Trace Elem. Res.* 55:203-214.
- Kim, J. and **G.F. Combs, Jr.** 1997. Studies on the Effects of Selenium on Rumen Microbial Fermentation *in vitro*. *Biol. Trace Elem. Res.* 55:215-224.
- Cheng, W.H., Y.S. Ho, D.A. Ross, B.A. Valentine, **G.F. Combs, Jr.** and X.G. Lei. 1997. Overexpression of Cellular Glutathione Peroxidase Does Not Affect Expression of Plasma or Phospholipid Hydroperoxide Glutathione Peroxidase in Mice Offered Diets Adequate or Deficient in Selenium. *J. Nutr.* 127:675-80.
- Cheng, W.H., Y.S. Ho, D.A. Ross, B.A. Valentine, **G.F. Combs, Jr.** and X.G. Lei. 1997. Cellular Glutathione Peroxidase Knock-out Mice Express Normal Levels of Selenium-Dependent Plasma and Phospholipid Hydroperoxide Glutathione Peroxidases in Various Tissues. *J. Nutr.* 127:1445-1450.
- Cheng, W.H., Y.S. Ho, B.A. Valentine, D.A. Ross, **G.F. Combs, Jr.** and X.G. Lei. 1998. Cellular Glutathione Peroxidase is the Mediator of Body Selenium to Protect Against Paraquat Lethality in Transgenic Mice. *J. Nutr.* 128:1070-1076.
- Lei, X.L., H.M. Dann, D.A. Ross, W.H. Cheng, **G.F. Combs, Jr.**, and K.R. Roneker. 1997. Dietary selenium supplementation is required to support full expression of three selenium-dependent peroxidases in various tissues of weanling pigs. *J. Nutr.* 128:130-5.
- Lei, X.L., D.A. Ross, J.E. Parks and **G.F. Combs, Jr.** 1997. Effects of dietary selenium and vitamin E on phospholipid hydroperoxide glutathione peroxidase expression in reproductive tissues of pubertal maturing male rats. *Biol. Trace Elem. Res.* 59:195-206.
- Cheng, W.H., **G.F. Combs, Jr.** and X.G. Lei. 1998. Knockout of cellular glutathione peroxidase affects selenium-dependent parameters similarly in mice fed adequate and excessive dietary selenium. *Biofactors.* 7:311-321.
- Clark, L.C., B. Dalkin, A. Krongrad, **G.F. Combs, Jr.**, B.W. Turnbull, E.H. Slate, R. Witherington, J.H. Herlong, E. Janosko, D. Carpenter, C. Borosso, S. Falk and J. Rounder. 1998. Decreased incidence of prostate cancer with selenium supplementation: Results of a double-blind cancer prevention trial. *Brit. J. Urol.* 81:730-734.
- Fischer, P.R., A. Rahman, J.P. Cimma, T.O. Kyaw-Myint, A.L. Kabir, K. Talukder, N. Hassan, B.J. Manaster, D.B. Staab, J.M. Duxbury, R.M. Welch, C.A. Meisner, S. Haque and **G.F. Combs, Jr.** 1999. Nutritional Rickets Without Vitamin D Deficiency in Bangladesh. *J. Tropical Pediat.* 45:291-293.
- Johnson, C.F., R.W. Langhans, L.D. Albright, **G.F. Combs, Jr.**, R.M. Welch, L. Heller, R.P. Glahn, R.M. Wheeler and G.D. Goins. 2001. Spinach: Nitrate analysis of an advanced life support (ALS) crop cultured under ALS candidate artificial light sources. *Proc. J. Soc. Automot. Engineers.* (In press)
- Nomura, A.M.Y., J. Lee, G.N. Stemmermann and **G.F. Combs, Jr.** 2000. Serum selenium and subsequent risk of prostate cancer. *Cancer Epidem. Biomarkers Prev.* 9:883-887.
- Burke, K., J. Clive, **G.F. Combs, Jr.**, J. Commisso, C.L. Keen and R.M. Nakamura. 2001. Effects of topical L-selenomethionine and oral vitamin E on pigmentation and skin cancer induced by ultraviolet irradiation in Skh:2 hairless mice. *Nutr. Cancer* 38:87-97.
- Moustafa, M.E., B.A. Carlson, M.A. El-Saadani, G.V. Krydov, Q.A. Sun, J.W. Harney, K.E. Hill, **G.F. Combs, Jr.**, L. Feifgenbaum, D.B. Mansur, R.F. Burk, M.J. Berry, A.M. Diamond, B.J. Lee, V.N. Gladyshev and D.L. Hatfield. 2001. Selective inhibition of selenoprotein synthesis in transgenic mice expressing isoptenyladenosine-deficient selenocysteine tRNA. 2001. *Mol. Cell Biol.* 21:3840-3852.
- Johnson, C.F., R.P. Glahn, M.A. Rutzke and **G.F. Combs, Jr.** 2001. Artificial gut bioassay system: influence of ascorbic acid on the bioavailability of iron from spinach using human Caco-2 cell line. *J. Nutr.* (In press)
- Duffield-Lillico, A.J., M.E. Reid, B.W. Turnbull, **G.F. Combs, Jr.**, E.H. Slate, L.A. Fischbach, J.R. Marshall and L.C. Clark. 2002. Baseline characteristics and the effect of selenium supplementation on cancer risk in a randomized clinical trial: a summary report of the Nutritional Prevention of Cancer Trial. *Cancer Epidem. Biomarkers Prev.* 11:630-639.
- Duffield-Lillico, A.J., B.L. Dalkin, M.E. Reid, B.W. Turnbull, **G.F. Combs, Jr.**, E.H. Slate, J.R. Marshall and L.C. Clark. 2002. Selenium supplementation, baseline plasma selenium status, and influence on prostate cancer: an analysis of the complete treatment period of the Nutritional Prevention of Cancer Trial. *J. Urol.* (in press).
- Xu, X.M., B.A. Carlson, T.A. Grimm, J. Kutza, M.J. Berry, R. Arreola, K.H. Fields, H. Shanmugam, K.T. Jeang, S. Oroszlan, **G. F. Combs, Jr.**, C.L. Hung, M. Sarngadharan, K.A. Clouse, V.N. Gladyshev, P.A. Marx and D.L. Hatfield. 2002. Monkey model for assessing the role of selenium in AIDS. *J. AIDS Res* 31:453-463.
- Waters, D.J., S. Shen, D.M. Cooley, D.G. Bostwick, J. Quian, **G.F. Combs, Jr.**, L.T. Glickman, C. Oteham, D. Schlittler and J.S. Morris. 2003. Dietary selenium supplementation reduced the extent of DNA damage and upregulated apoptosis within the aging prostate. *J. Nat. Cancer Inst.* 95:237-241.
- Fett, J.D., A.A. Ansari, J.B. Sundstrom and **G.F. Combs, Jr.**, 2002. Peripartum cardiomyopathy: selenium deficiency is not a risk

- factor. *Int. J. Cardiol.* 86:211-316.
- Duffield-Lillico, A.J., E.H. Slate, M.E. Reid, B.W. Turnbull, P.A. Wilkins, **G.F. Combs, Jr.**, E.G. Gross, G.F. Graham, J.R. Marshall and L.C. Clark. 2003. Selenized yeast supplementation and secondary prevention of non-melanoma skin cancer: a final report on the primary endpoint on the Nutritional Prevention of Cancer Trial. *J. Nat. Cancer Inst.* 95:1477-1481.
- Waters, D.J., S. Shen, D.M. Cooley, D.G. Bostwick, J. Qian, **G.F. Combs, Jr.**, L.T. Glickman, C. Oteham and J.S. Morris. 2003. Relationship between toenail concentration of selenium and the level of genotoxic stress within the aging prostate. *J. Nat. Cancer Inst.* 95:237-241.
- Wedekind, K.J., S. Yu and **G.F. Combs, Jr.**, 2004. The Selenium Requirement of the Dog. *J. Anim. Physiol. Anim. Nutr.* 88:340-347.
- Combs, Jr., G.F. and N. Hassan, 2005. The Chakaria food system study: Household-level, case control study to identify first factors for rickets in Bangladesh. *Eur. J. Clin. Nutr.* 59:1291-1301.
- Rutzke, C.J., Glahn, R.P., Rutzke, M.A., Welch, R.M., Langhans, R.W., Albright, L.D., **Combs, Jr., G.F.** and Wheeler, R.M. 2004. Bioavailability of iron from spinach using an *in vitro*/human Caco-2 cell bioassay model. *Habitation* 10:7-14.
- Reid, M.E., **G.F. Combs, Jr.**, A.J. Duffield-Lillico, R. Natarajan, M.P. Rayman, J.K. Lodge, L.C. Clark, J.R. Marshall. 2005 The Association Between Baseline Selenium, Alpha and Gamma Tocopherol, and the Effect of Selenium Supplementation on Cancer Incidence. *Cancer Epidem. Biomarkers Prev.* (in press).
- Stranges, S., J.R. Marshall, M. Trevisan, R., Natarajan, R.P. Donahue, **G.F. Combs, Jr.**, E. Farinero and M.E. Reid, 2005. Effects of Selenium Supplementation on Cardiovascular Disease Incidence and Mortality: Secondary Analyses in a Randomized Clinical Trial. *Am. J. Epidemiol.* 163:694-699.
- Chang, W.P., **Combs, G.F. Jr.**, Scanes, C.G., J.A. Marsh. 2005. The effects of dietary vitamin E and selenium deficiencies on plasma thyroid and thymic hormone concentrations in the chicken. *Devel. Comp. Immunol.* 29:265-273.
- Zeng, Z., E.O. Uthus and **G. F. Combs, Jr.** 2005. Mechanistic aspects of the interaction between selenium and arsenic. *J. Inorg. Biochem.* 99:1269-1274.
- Waters, D.J., S. Shen, L.T. Glickman, D.M. Cooley, D.G. Bostwick, J. Qian, **G.F. Combs, Jr.** and J.S. Morris. 2005. Prostate cancer risk and DNA damage: translational significance of selenium supplementation in a canine model. *Carcinogenesis* 26:1256-1262.
- Waters, D.J., S. Shen, H. Hu, S.S. Kengeri, D.M. Cooley, E.C. Chiang, Y. Chen, D. Schlittler, C. Oteham, **G.F. Combs, Jr.**, L.T. Glickman, J.S. Morris and D.G. Bostwick. 2007. Noninvasive prediction of prostatic DNA damage by oxidative stress challenge of peripheral blood lymphocytes. *Cancer Epidemiol. Biomarkers Prev.* 16:1906-1910.
- Azrak, R.G., S. Cao, L. Pendyala, F. Durrani, J. Prey, **G.F. Combs, Jr.**, M. Fakhri and Y.M. Rustum. 2007. Efficacy of increasing the therapeutic index of irinotecan: plasma and tissue selenium concentrations are methylselenocysteine dose-dependent. *Biochem. Pharmacol.* 73:1280.
- Reid, M., A. Duffield-Lillico, E. Slate, N. Natarajan, B. Turnbull, E. Jacobs, **G. Combs, Jr.**, D. Alberts, L. Clark and J. Marshall. 2008. The Nutritional Prevention of Cancer: 400 Mcg Per Day Selenium Treatment Sub-Study. *Nutr Cancer* 60:155-163.
- Combs, Jr., G.F.**, N. Hassan, N. Dellegana, D. Stabb, P. Fischer, C. Hunt and J. Watts. 2008. Apparent Efficacy of Food-Based Calcium Supplementation in Preventing Rickets in Bangladesh. *Biol. Trace Elem. Res.* 121:193-204.
- Stranges, S., J.R. Marshall, R.P. Donahue, M. Trevisan, R. Natarajan, **G.F. Combs, Jr.**, F.P. Farinero and M.E. Reid, 2007. Effects of Long-Term Selenium Supplementation on Type 2 Diabetes: A Randomized Trial. *Ann. Int. Med.* 147:217-223.
- Hu, H., Li, G.X., Wang, L., Watts, J. and **Combs, Jr., G.F.** 2008. Methylseleninic acid enhances taxane drug efficacy against human prostate cancer and down regulates anti-apoptotic proteins Bcl-XL and survivin. *Clin Cancer Res* 15:1150-1158.
- Li, G.X., Lee, H.J., Wang, Z., Hu, H., Wang, Lei, Jiang, C., Watts, J., **Combs, Jr., G.F.** and Lu, J. (2008) Superior *in vivo* inhibitory efficacy of methylselenium than selenomethionine or selenite against human prostate cancer. *Carcinogenesis* 29:1005-1012.
- Carlson, B.A., U. Schweitzer, C. Perella, R.K. Shrimali, L. Feigenbaum, L. Shen, S. Speransky, T. Floss, S.J. Jeong, J. Watts, V. Hoffman, **G.F. Combs, Jr.**, V.N. Gladyshev and D.L. Hatfield. 2009. The selenocysteine tRNA STAF-binding region is essential for adequate selenocysteine tRNA status, selenoprotein expression and early stage survival of mice. *Biochem. J.* 417:61-71.
- Muñoz, L.M., and **G.F. Combs Jr.** Estatus de selenio en niños preescolares y mujeres en edad reproductiva de Costa Rica. 2009 *Arch. Latinoamer. Nutr.* (in press)
- Wastney, M.E. **Combs, Jr., G.F.**, Canfield, W.K., Veillon, C., Taylor, P.R., Patterson, K.Y., Levander, O.A., Hill, A.D. Moler, J.E., and Patterson, B.H. 2009. An integrated model of selenium metabolism in humans. *Am. J. Clin. Nutr.* (submitted)
- Patterson, B.H., **Combs, Jr., G.F.**, Canfield, W.K., Patterson, K.Y., Hill, A.D., Taylor, P.R., Levander, O.A., Moler, J.E., and Wastney, M.E. 2009. Human selenium metabolism is altered by two years of supplementation. *Am. J. Clin. Nutr.* (submitted)
- Chaing, M.S., Shen, S., Kengeri, S.S., Xu, H.P., **Combs, Jr., G.F.**, Morris, J.S., Bostwick, D.G. and Waters, D.J. 2009. Defining the optimal selenium dose for prostate cancer risk reduction: insights from the U-shaped relationship between selenium status, DNA damage and apoptosis. *Dose-Response* (in press).
- Combs, Jr., G.F.**, Midthune, D.N., Patterson, K.Y., Canfield, W.K., Hill, A.D., Levander, O.A., Taylor, P.R., Moler, J.E., and Patterson, B.P. (2009) Effects of selenomethionine supplementation on selenium status and thyroid hormone concentrations in healthy adults. *Am. J. Clin. Nutr.* 89-1-7.
- Gunter, S.A., and **Combs, Jr., G.F.** (2010) Effect of mineral supplementation on the performance of stocker cattle grazing Winter-wheat pasture. *Proc. Western Sec., Amer. Soc. Animal Sci.* 61: 134-137.

## **Books**

- Subcommittee on Selenium, Board on Agriculture, NAS/NRC 1983. Selenium in Nutrition. Rev. ed., Nat Acad. Press, Wash, DC, 174 pp.
- Combs, G.F., Jr.**, J.E. Spallholz, O.A. Levander and J.E. Oldfield (eds). 1987. Proceedings of the Third International Symposium on

- Selenium in Biology and Medicine. AVI Publishing Co., Westport, CT, volumes A and B, 1138 pp.
- Subcommittee on Vitamin Tolerances, Board on Agriculture, NAS/NRC. 1987. Vitamin Tolerances of Domestic Animals. Nat. Acad. Press, Washington, DC, 96 pp.
- Combs, G.F., Jr.** and J. Saroka. 1987. Selenomethionine: an Annotated Bibliography. Cornell Univ., Ithaca, NY, 86pp.
- Combs, G.F., Jr.** 1992. The Vitamins: Fundamental Aspects in Nutrition and Health. Academic Press, New York, 528pp.
- Combs, G.F., Jr.** 1998. The Vitamins: Fundamental Aspects in Nutrition and Health. 2<sup>nd</sup> Rev. edition, Acad. Press, New York, 618 pp.
- Combs, G.F., Jr.** 1999. [The Vitamins] in Russian (L. Khassanova, trans.), Bashkir State U. Press, Ufa, Bashkortostan, Russia, 444 pp.
- Combs, G.F., Jr.**, R.M. Welch, J.R. Duxbury, N.T. Uphoff and M. Nesheim (eds.). 1996. Food-Based Approaches to Preventing Micronutrient Malnutrition: a Consensus Research Agenda, Cornell Internat. Inst. Food, Agric. and Dev., Ithaca, NY, 68 pp.
- Whanger, P.M., G.F. **Combs, Jr.** and J.Y. Yeh (eds) 1995. Environmental Bioinorganic Chemistry of Selenium. Chin. Acad. Sci., Beijing, 239 pp.
- Combs, Jr., G.F.** and R.M. Welch (eds.) 1998. Creating Healthful Food Systems: Linking Agriculture to Human Needs. Cornell International Institute for Food, Agriculture and Development, Ithaca, New York, 34 pp.
- Combs, Jr., G.F.** 2001. Larry in My Life, Cornell University, Ithaca, New York, 168 pp.
- Combs, G.F., Jr.** 2007. The Vitamins: Fundamental Aspects in Nutrition and Health. 3<sup>rd</sup> Rev. Edition, Acad. Press, New York, 565 pp.

### **Reviews, chapters, etc.**

- Scott, M.L., T. Noguchi and **G.F. Combs, Jr.** 1974. New evidence concerning mechanisms of action of vitamin E and selenium. *Vit. Horm.* 32:429-444.
- Combs, G.F., Jr.**, T. Noguchi and M.L. Scott. 1975. Mechanisms of action of selenium and vitamin E in protection of biological membranes. *Fed. Proc.* 34:2090-2095.
- Combs, G.F., Jr.** and M.L. Scott. 1977. Nutritional interrelationships of vitamin E and selenium. *BioScience* 27:467-473.
- Combs, G.F., Jr.** and M.L. Scott. 1977. The effects of polychlorinated biphenyls on birds. *World's Poultry Sci. J.* 33:31-46.
- Combs, G.F., Jr.** 1979. Interrelationships of nutrition and infection: introductory remarks. *Fed. Proc* 38:73.
- Combs, G.F., Jr.** 1981. Assessment of vitamin E status in animals and man. *Proc. Nutr. Soc.* 40:187-194.
- Anonymous. 1984. Evidence for prostaglandin I<sub>3</sub> formation in vivo from dietary eicosapentanoic acid. *Nutr. Rev.* 42:317-318
- Anonymous. 1984. Phosphorus bioavailability in poultry nutrition. *Nutr. Rev.* 42:387-389
- Combs, G.F., Jr.** and S. Combs. 1984. The nutritional biochemistry of selenium. *Ann. Rev. Nutr.* 4:257-480.
- Combs, G.F., Jr.** and L. Clark. 1985. Can dietary selenium modify cancer risk? *Nutr. Rev.* 43:325-331.
- Combs, G.F., Jr.** 1985. Selenium and carcinogenesis. *Federation Proc.* 44:63-64.
- Combs, G.F., Jr.** 1985. Roles of selenium and vitamin E in poultry nutrition. *Taiwan Livestock Res.* 18:75-81.
- Clark, L. and **G. Combs, Jr.** 1986. Selenium compounds and the prevention of cancer: research needs and public health implications. *J. Nutr.* 116:170-173.
- Combs, G.F., Jr.** and S.D. Mercurio. 1986. Selenium and oxidation injury, *in* Nutritional Diseases: Research Directions in Comparative Pathobiology (D.G. Scarpelli and G. Magaki, eds.) Alan R. Liss, New York, pp. 347-358.
- Combs, G.F., Jr.** and S.B. Combs. 1987. Selenium Effects on Drug and Foreign Compound Toxicity. In: Metabolic Interactions of Nutrition and Drugs (J.N. Hathcock, ed.) vol. 4 of Internat. Encyclop. Pharmacol. Therapeut. 33:303-315.
- Anonymous. 1987. Incorporation of Selenium into Glutathione Peroxidase. *Nutr. Rev.* 45:344-345
- Combs, G.F., Jr.** 1987. Protective Roles of Minerals Against Free Radical Damage. *Nutrition '87*, pp. 55-59.
- Combs, G.F., Jr.** 1988. Selenium. Chapter 14 *in* Nutrition and Cancer Prevention (T.E. Moon and M. Micozzi, eds), Marcel Dekker, New York, pp. 389-420.
- Combs, G.F., Jr.** 1988. Selenium in foods. *Adv. Food Res.* 32:85-113.
- Clark, L.C. and **G.F. Combs, Jr.** 1988. Reply to letter of Dr. Foster. *J. Nutr.* 118:238-239.
- Anonymous. 1988. Developmental changes in niacin compounds in corn. *Nutr. Rev.* 8:301-303
- Anonymous. 1988. Rheumatoid arthritis patients show low granulocyte glutathione peroxidase activities which respond poorly to selenium treatment. *Nutr. Rev.* 8:284-286
- Anonymous. 1988. Caffeine can increase brain serotonin levels. *Nutr. Rev.* 8:358-359
- Anonymous. 1989. Possible enhancement of carcinogenesis by selenium in an animal tumor model. *Nutr. Rev.* 47:173-175
- Combs, G., Jr.** 1991. Selenium in Nutrition, *in* Encyclopedia of Human Biology (R. Dulbecco, ed.) Academic Press, vol.6, pp. 789-800.
- Anonymous. 1990. Vitamin C can promote selenium utilization. *Nutr. Rev.* 48:290-291
- Anonymous. 1990. Biotin in animal nutrition. *Nutr. Rev.* 48:352-355
- Anonymous. 1991. Fungal phytase can improve the bioavailability of plant phosphorus. *Nutr. Rev.* 49:207-208
- Litov, R.E. and **G.F. Combs, Jr.** 1991. Selenium in the nutrition of infants and children. *Pediatrics* 87:339-351.
- Combs, G.F., Jr.** 1991. Nutritional interrelationships of vitamin E and selenium, *in* Vitamin E in Animal Nutrition and Management (M. Coehlo, ed.), BASF, Parsippany, NJ, pp. 19-27.
- Combs, G.F., Jr.** 1991. Mechanisms of absorption, transport and cellular uptake of vitamin E, *in* Vitamin E in Animal Nutrition and Management (M. Coehlo, ed.) BASF, Parsippany, NJ, pp. 29-41.
- Combs, G.F., Jr.** 1993. The Role of Ascorbic Acid in the Nutrition of Poultry. Takeda Chem. Co., Tokyo, 25pp.
- Combs, G.F., Jr.** 1994. Essentiality and Toxicity of Selenium: Critique of the Recommended Dietary Allowance and the Reference Dose. *in* Risk Assessment of Essential Elements (W. Mertz, C. Abernathy and S. Olin, eds.) ILSI Press, Wash., D.C., p. 167-183.

- Combs, G.F., Jr.** 1994. Selenium in Poultry Nutrition and Health. *Vet. Clin. Pract.* 1:133-140.
- Combs, G.F., Jr.** 1995. Selenium in nutrition, in *Encyclopedia of Human Biology* 2<sup>nd</sup> ed.(R. Dulbecco, ed.) Acad.Press,vol 7, pp743-54.
- Combs, G.F., Jr.** 1996. Selenium and Cancer, in *Biochemistry and Molecular Biology of Selenium* (Z. Wang, ed.), Chin. Acad. Sci., Beijing , 236 pp.
- Combs, G.F., Jr.** 1996. Should Intakes with Beneficial Actions, Often Requiring Supplementation, be Considered for the RDAs? Proc. Workshop on New Approaches, Endpoints and Paradigms for Recommended Dietary Allowances (RDAs) of Mineral Elements. *J. Nutr.* 126:2373S-2376S.
- Combs, G.F., Jr.** 1997. Selenium and Cancer, Chapter 8 in *Antioxidants and Disease Prevention* (H. Garewal, ed.), CRC Press, New York, pp. 97-113.
- Combs, G.F., Jr.** 1997. Book Review: *Nutrition and Cancer*. *Am. J. Clin. Nutr.* 65: 893.
- Combs, G.F., Jr.,** and W.P. Gray. 1998 Chemopreventive Agents: Selenium. *Pharm. Expt. Therapeut.*79:179-192
- Combs, G.F., Jr.** 1998. Emerging relationships of vitamins and cancer risks. *Curr. Opinion Clin. Nutr. Metab. Care* 1: 519-523.
- Combs, G.F., Jr.,** R. M. Welch and J.M. Duxbury. 1998. Sustainable Food Systems Approaches to Improving Nutrition and Health. In *Taste Life! The Organic Choice*. (D. Richard and D. Byers, eds.), Vital Health Publ., pp. 100-109.
- Combs, G.F., Jr.** 1999. Chemopreventive Mechanisms of Selenium. *Medizinische Klinik* 94:106,
- Combs, G.F., Jr.** and L.C. Clark. 1999. Selenium and Cancer, Chapter 16 in *Nutritional Oncology* (D. Heber, G. Blackburn & W. Go, eds.), Academic Press, New York, pp.215-222.
- Combs, G.F., Jr.** 1999. Vitamins, Chapter 4 in *Krause's Food, Nutrition and Diet Therapy*, 10<sup>th</sup> ed. (L.K. Mahan and S. Escott-Stump, eds.), W.B. Saunders Co., Philadelphia, pp. 69-109.
- Combs, Jr., G.F.** 2000. Food-Based Approaches to Improving Micronutrient Malnutrition: the Case of Selenium. *BioFactors* 12:1-5.
- Combs, Jr., G.F.** 2000. Considering the Mechanisms of Cancer Prevention by Selenium. Chapter 9 in *Nutrition and Cancer Prevention: New Insights into the Role of Phytochemicals*, *Adv. Exp. Med. Bio.* 492: 107-117.
- Combs, Jr., G.F.** 2001. Global Aspects of Selenium in Human Nutrition and Health, Chapter in *Encyclopedia of Life Support Systems*, (I. Cakmak, ed.), in *Encyclopedia of Life Support Systems (EOLSS)*, Eolss Publishers, Oxford, UK, [<http://www.eolss.net>]
- Combs, Jr., G.F.** 2001 Selenium in Global Food Systems. *Br. J. Nutr.* 85:517-547.
- Raich, P.C., J. Lu, H.J. Thompson and **G.F. Combs, Jr.** 2001. Selenium in Cancer Prevention: Clinical Issues and Implications. *Cancer Invest.* 19:540-553.
- Combs, Jr., G.F.** 2001 Impact of Selenium and Cancer-Prevention Findings on the Nutrition-Health Paradigm. *Nutr. Cancer* 40:6-11.
- Combs, Jr., G.F.,** L.C. Clark and B.W. Turnbull. 2001. An Analysis of Cancer Prevention by Selenium. *BioFactors* 14:153-159.
- Combs, Jr., G.F.** and J. Lü, . 2001. Selenium as a Cancer Preventive Agent, in *Selenium: Molecular Biology and Role in Health* (D. Hatfield, ed.), Kluwer Academic Publ., New York, pp. 205-217.
- Combs, Jr., G.F.** 2003. Selenium: Properties and Determination, in *Encyclopedia of Food Sciences and Nutrition* (Caballero B, Trugo L and Finglas, P, eds.), Academic Press, New York
- Combs, Jr., G.F.** 2005. Clinical and Nutritional Assessment Related to Geological Issues. Chapter 7 In *Medical Geology* (O. Sellinius, ed.) Academic Press, New York, p.161-177.
- Combs, Jr., G.F.** 2004. The Status of Selenium in Prostate Cancer Prevention. *Br. J. Cancer* 91:195-199.
- Combs, Jr., G.F.** 2004. Essential Minerals in Water. in *Nutrient Minerals in Drinking Water and Potential Health Consequences of Long-Term Consumption of Desalinated and Other Low-Mineral Waters* (J. Cotruvo, ed.) WHO, Rome (in press).
- Klevay, L.M, and **Combs, Jr., G.F.** 2004. Mineral Elements Related to Cardiovascular Health. in *Nutrient Minerals in Drinking Water and Potential Health Consequences of Long-Term Consumption of Desalinated and Other Low-Mineral Waters* (J. Cotruvo, ed.) WHO, Rome (in press).
- Combs, Jr., G.F.,** 2005, Evidence and Research Needs to Support a Health Claim for Selenium and Cancer Prevention. *J. Nutr*135:343-7
- Combs, Jr., G.F.** and J. Lü, . 2006. Selenium as a Cancer Preventive Agent, in *Selenium: Molecular Biology and Role in Health*, 2<sup>nd</sup> ed. (D. Hatfield, ed.), Kluwer Academic Publ., New York, pp. 205-218.
- Combs, Jr., G.F.** and Nielsen, F.H. 2007. Health Significance of Calcium and Magnesium: Examples from Human Studies, in *Proceedings of the WHO/ILSI Conference on Calcium and Magnesium in Cardiovascular Health*, WHO, Rome, (in press)
- Combs, Jr., G.F.** 2007. Nutritional Functions of Selenium, in *Selenium in Health and Disease* (F. Hincal, A.O. Çavdar and B. Giray, eds.) Turkish Academy of Sciences, Ankara, pp. 3-12.
- Combs, Jr., G.F.** 2007. The Role of Selenium in Cancer Prevention, in *Selenium in Health and Disease* (F. Hincal, A.O. Çavdar and B. Giray, eds.) Turkish Academy of Sciences, Ankara, pp. 97-108.
- Combs, Jr., G.F.** 2007. Are there Risks Associated with Supranutritional Selenium??. Proc. Congress on Essential Minerals and Trace Elements, (in press)
- Combs, Jr., G.F.** and Nielsen, F. 2007. Health Significance of Calcium and Magnesium: Examples from Human Studies, in *Calcium and Magnesium in Drinking-Water: Public Health Significance* (J. Cotruvo and J. Bertram, eds.), WHO, Rome, pp. 82-93.
- Zeng, H., and **G.F. Combs, Jr.** 2008. Selenium as an anticancer nutrient: roles in cell proliferation and tumor cell invasion. *J. Nutr. Biochem.* 19:1-7.
- Jackson. M.I., and **Combs, Jr., G.F.** (2008) Selenium and anti-carcinogenesis. *Curr. Opin. Clin. Nutr. Hlth Care.* 11:718-726
- Rayman MP, **Combs GF Jr**, Waters DJ (2009) Selenium and vitamin E supplementation for cancer prevention. *JAMA.* 301:1876.
- Combs GF Jr.** (2011) Selenium, Chapter 39 in *Biochemical and Physiological Aspects of Human Nutrition* (Stipanuk M, Caudill M,

eds.), Saunders, New York.

**Combs GF Jr.** (2011) Opportunities for Selenium-Enriched Foods in Cancer Prevention, Chapter 7 in Fertilizer Use and Human Health (Bruulsema T, Heffer P, Moran K, Welch R, Cakmak I, eds.), IFA-IPNI, New York.

### Technical articles (non-refereed)

- Scott, M.L. and **G.F. Combs, Jr.** 1973. The effect of vitamin D on eggshell quality. Proc. Maryland Nutr. Conf., pp.44-48.
- Scott, M.L. and **G.F. Combs, Jr.** 1973. Gli effetti della vitamina D sulla qualità della guscio della uovo. G. Alleva 3:31-35.
- Scott, M.L. and **G.F. Combs, Jr.** 1974. Dietary vitamin E and selenium requirements for optimal metabolic function at the cellular level. Proc. Western Hemisphere Nutr. Conf. pp.44-48.
- Combs, G.F., Jr.** 1975. Problems with molds and mycotoxins in poultry feeds. Proc. Cornell Nutr. Conf. pp. 109-115.
- Combs, G.F., Jr.** 1976. Influences of vitamin A and other reducing compounds on the selenium-vitamin E nutrition of the chicken. Proc. Distillers Feed Res. Conf., 31:40-48.
- Combs, G.F., Jr.** 1976. Factors affecting the utilization of vitamins D and E in the chick. Proc. Cornell Nutr. pp.86-93.
- Young, R.J., M.L. Scott, R.E. Austic and **G.F. Combs, Jr.** 1976. A review of the nutrient requirements for chicks, pullets and laying hens. Proc. Cornell Nutr. Conf., pp.45-58.
- Combs, G.F., Jr.** 1977. Selenium: biochemical functions and importance in poultry nutrition. Proc. Georgia Nutr. Conf., pp. 2-15.
- Combs, G.F., Jr.** and M.L. Scott. 1977. The selenium needs of laying and breeding hens. Proc. Cornell Nutr. Conf., pp. 74-82.
- Combs, G.F., Jr.** and R.A. Morse. 1978. Package bees: installation and immediate care in the northeast. Cornell Info. Bull. no. 7, 8 pp.
- Combs, G.F., Jr.** and A.H. Parsons. 1978. Calcium homeostasis in pullets of two strains selected for differences in eggshell strength. Proc. Cornell Nutr. Conf., pp. 43-46.
- Poston, H.A., and **G.F. Combs, Jr.** 1979. Interrelationships between requirements for dietary selenium, vitamin E and l-ascorbic acid by Atlantic salmon (*Salmo salar*) fed a semipurified diet. Fish Health News 8:vi-vii.
- Combs, G.F., Jr.** 1979. Nutritional impact of oxidant drugs. Proc. Cornell Nutr. Conf., pp. 9-11.
- Combs, G.F., Jr.**, and J.C. Alenier. 1979. Palatability of poultry feeds. 1979. Proc. Cornell Nutr. Conf., pp. 42-8.
- Combs, G.F., Jr.**, M.J. Bunk and M.W. LaVorgna. 1980. Vitamin E and selenium in the metabolism of the sulfur-containing amino acids. Proc. Cornell Nutr. Conf., pp. 109-112.
- Combs, G.F., Jr.**, and B. van Toledo. 1980. Fluorosis in the laying hen. Proc. Cornell Nutr. Conf., pp. 91-93.
- Combs, G.F., Jr.** 1980. The search for the nutritional role of selenium: a success story in poultry nutrition. Feed Management, pp. 38-39.
- Combs, G.F., Jr.** 1980. Impact of mycotoxins on poultry feeding. Turkey World, Nov. Dec., pp. 42-43.
- Combs, G.F., Jr.**, R.C. Baker and M.M. El-Begarmi. 1981. Influences of diet on the body composition of chicks. Proc. Cornell Nutr. Conf., pp. 103-108.
- Parsons, A and **G. Combs, Jr.** 1981. Influence of diet on calcium homeostasis in the chick. Proc. Cornell Nutr. Conf., p. 86-92.
- Whitacre, M.E. and **G.F. Combs, Jr.** 1982. The role of selenium in the chick pancreas. Proc. Cornell Nutr. Conf., pp. 25-30.
- Combs, G.F., Jr.** 1982. Vitamin E, selenium and sulfur amino acid interactions. Proc. NFIA Symposium, Vitamins - the life essentials. National Feed Inged. Assoc., 206 pp.
- Combs, G.F., Jr.** and Y.P. Zhou. 1982. Factors affecting the apparent bioavailability of selenium for the chick. Proc. Cornell Nutr. Conf., p. 36-39.
- Combs, G.F., Jr.** 1982. Influences of diet on chick body composition. Feedstuffs, p. 20, 28.
- Combs, G.F., Jr.** 1982. The role of selenium in the nutrition of animals and man. Proc. Distillers' Res. Conf. 37:55-64.
- Saroka, J.M. and **G.F. Combs, Jr.** 1983. A comparison of the excretion of L-methionine and its hydroxyl analog. Proc. Cornell Nutr. Conf., p. 83-87.
- Combs, G.F., Jr.** 1983. Vitamin E and selenium for broilers and breeders. Proc. Merck Techn. Symp.
- Combs, S. and **G.F. Combs, Jr.** 1984. Varietal differences in the vitamin E content of corn. Proc. Cornell Nutr. Conf., p. 95-99.
- Combs, G.F., Jr.** 1984. Roles of selenium and vitamin E in the nutrition of poultry. Proc. Pacific Northwest An. Nutr. Conf., p. 18-25.
- Combs, G.F., Jr.** 1984. Utilization of methionine isomers and analogs by the chick. Proc. Pacific Northwest Animal Nutr. Conf.
- Combs, G.F., Jr.**, Q. Su, C. Liu, M. Sinisalo and S. Combs. 1985. Interactions of selenium and other minerals. Proc. Cornell Nutr. Conf., p. 45-51.
- Combs, G.F., Jr.** 1986. Selenium in the American food supply. Proc. 11th Ann. Nat. Nutr. Data Bank Conf.
- Combs, G.F., Jr.** 1986. Current thinking on selenium and health. Professional Perspectives, No. 2.
- Combs, G.F., Jr.** and S.D. Mercurio. 1986. Natural inhibitors of selenium-dependent glutathione peroxidase. Proc. Cornell Nutr. Conf., p. 39-43.
- Lu, J. and **G. Combs, Jr.** 1986. Inhibition of pancreatic exocrine function by high levels of dietary zinc. Proc. Cornell Nutr. Conf. p. 52-6.
- Combs, G.F., Jr.** 1988. Vitamin tolerances in livestock. Proc. Cornell Nutr. Conf., p. 35-40.
- Kim, Y.S. and **G.F. Combs, Jr.** 1989. Effects of selenium and vitamins E and C on glutathione and glutathione-S-transferase in the chick. Proc. Cornell Nutr. Conf., p. 37-42.
- Combs, G.F., Jr.** 1992. Vitamin tolerances of animals. Proc. Takeda Symp. p. 5-12.
- Combs, G.F., Jr.** 1992. Vitamin E and Selenium in Poultry Nutrition. Proc. Minn. Nutr. Conf. p. 260-270.
- Combs, G.F., Jr.** 1992. Role of Animal Products in the Vitamin Intakes of Americans. Proc. Cornell Nutr. Conf. p. 7-12.
- Combs, G.F., Jr.**, G.A. Weaver, J.A. Krause and J.J. Stragand. 1993. Effects of Dietary Selenium on the Hindgut Microflora: Implications for Colonic Health. Proc. Cornell Nutr. Conf. p. 82-89

- Combs, G.F., Jr.** 1994. Nutritional Essentiality: a Changing Paradigm. Proc. Cornell Nutr. Conf. p. 9-19.
- Combs, G.F., Jr.** 1995. Emphasizing Fruits and Vegetables in American Diets: Implications for Vitamin and Mineral Intakes. Proc. Cornell Nutr. Conf. p. 52-57.
- Combs, G.F., Jr.,** R.M. Welch and J.M. Duxbury. 1996. Thinking in Terms of Food Systems. Proc. Cornell Nutr. Conf. p. 48-54.
- Lei, X.G., H.M. Dann, **G.F. Combs, Jr.,** D.A. Ross and K.R. Roneker. 1996. What Level of Selenium Should We supplement to Diets for Young Pigs? Proc. Cornell Nutr. Conf. p. 83-86.
- Combs, Jr., G.F.,** J.M. Duxbury and R.M. Welch. 1996. Cornell University Program on Food Systems for Improved Health: Fashioning Food Systems - Just for the Health of It. Micronutr. Agric. 2:28-30.
- Combs, Jr., G.F.** 1997. Dietary selenium allowances and new threshold intakes with respect to toxicity. Biomed. Environ. Sci. 10:1-3.
- Combs, Jr., G.F.,** L.C. Clark and B.W. Turnbull. 1997. Reduction of Cancer Mortality and Incidence by Selenium Supplementa-tion. Med. Klin. 92:42-45.
- Welch, R.M., **G.F. Combs, Jr.** and J.M. Duxbury. 1997. Toward a "Greener" Revolution. Issues Sci. Technol. 14:50-58.
- Combs, Jr., G.** 1997. Dietary Selenium Allowances and New Threshold Intakes with Respect to Toxicity. Biomed Environ Sci 10:356-8.
- Combs, Jr., G.F.,** 1997. Food systems for improved health: linking agricultural production and human nutrition. Eur. J. Clin. Nutr. 51:S32-S33.
- Combs, Jr., G.F.,** L.C. Clark and B.W. Turnbull. 1997. Reduction of cancer risk with an oral supplement of selenium. Biomed. Environ.Sci. 10:227-234.
- Combs, Jr., G.F.,** R.M. Welch and J.M. Duxbury. 1998. Revealing Hidden Hunger: Solving the Micronutrient Famine. The World & I, April: 174-181.
- Combs, Jr., G.F.** 1998. Summary Remarks: Issues Facing the American Food System, in Creating Healthful Food Systems: Linking Agriculture to Human Needs. (Combs, Jr., G.F. and R.M. Welch), Cornell International Institute for Food, Agriculture and Development, Ithaca, New York, pp.29-33.
- Combs, Jr., G.F.,** L.C. Clark and B.W. Turnbull. 1998. Evidence of Cancer Prevention by Selenium in a Randomized, Placebo-Controlled, Clinical Trial. In. Metal Ions in Biology and Medicine, vol. 5 (Collery, P., P. Brätter, V. Negretti de Brätter, L. Khassanova and J.-C. Etienne, eds.) Pp. 566-571.
- Combs, Gerald, Jr.** 1998. Los Antioxidants en la Salud y la Nutrición. Dieta y Salud 5:2-6, Kellogg's, Querétaro, Qro., México
- Combs, Gerald F., Jr.,** 1998. Adequate vs. Optimum. Petfood Industry. July/August, pp. 31-43.
- Combs, Gerald F., Jr.,** 1998. Towards a Health Food System. CALS news, June.
- Combs, Jr., G.F.,** 1998. Keeping Up with Selenium. Proc. Cornell Nutr. Conf. , pp. 169-178.
- Combs, Jr., G.F.,** L.C. Clark and B.W. Turnbull. 1999. Cancer Prevention by Selenium: Evidence from a Randomized Clinical Trial. InFoOnkologie suppl 2/99:3-6.
- Combs, Jr., G.F.,** T. Hyun and W.P. Gray. 2000. Nonprotein bound selenium in plasma: relevance in assessing selenium status. In. Metal Ions in Biology and Medicine, vol. 6 (Centeno, J., Collery, Vernet G. Finkelman R., Gibb, H. & Eteinne J., eds.) pp. 237-240.
- Combs, Jr., G.F.,** P.R. Fischer, N. Hassan, A. Daly, J.M. Duxbury, R.M. Welch, C.A. Meisner, S. Haque and the Bangladesh Rickets Prevention Consortium. 2000. Calcium deficiency rickets in Bangladesh. In. Metal Ions in Biology and Medicine, vol. 6 (Centeno, J.A., Collery, Vernet G. Finkelman R.B., Gibb, H. and Eteinne J.C., eds.) pp. 517-520.
- Khassanova, L.A., Z.M. Khassanova, A.Y. Ovanoc, L.Y. Markelia, A.V. Gavrushkin and **G.F. Combs, Jr.,** 2000. Influence of amino acids on the heavy metal toxicity in *Escherichia coli* K12 cells. In. Metal Ions in Biology and Medicine, vol. 6 (Centeno, J.A., Collery, Vernet G. Finkelman R.B., Gibb, H. and Eteinne J.C., eds.) pp. 664-668.
- Combs, Jr., G.F.** 2001. Development of anti-carcinogenic foods from animals. Proc. Cornell Nutr. Conf. p.14.
- Combs, Jr. G.F.** and N. Hassan. 2000. Needs for calcium-rich foods in developing countries. Proc. Cornell Nutr. Conf. p.15.
- Uphoff, N. and **J. Combs, 2001.** Some things that can't be true but are: rice, rickets and what else? 'Unlearning' conventional wisdoms to remove paradigm blockages. Eldis, <http://www.ids.ac.uk/eldis/questioning/uphoff.htm>
- Hassan, N. and **G.F. Combs, Jr.** 2002. The Chakaria Food System Study: a Household-Level, Case-Control Study to Identify Risk Factors for Rickets. Cornell Internat. Inst. Food, Agriculture, Development, Ithaca, NY, 64 pp.
- Combs, Jr. G.F.** 2003. Contributions of animal nutrition to human health: the selenium story. Proc. Maryland Nutr. Conf., p. 5-9.
- Combs, Jr., G.F.** 2005. Importance of Selenium in Human Nutrition. Agrifoods Res. Rep. 69: 60-70
- Combs, Jr., G.F.** Leading Issues in Nutrition: What Opinion Leaders Say. Nutrition Today (in press) 2008.
- Combs, Jr., G.F.** Parks and recreation programs as instruments of public health. Focus, Fall 2008, 14,16.
- Combs, Jr., G.F.,** Sorum, S.M and P. Baird. 2010. Opening Doors on Science, Tribal College J. (in press)

#### Press Articles

- Combs, Jr., G.F.** 2003. North Dakota's Role in World Food Day. Grand Forks Herald, Oct 15
- Combs, Jr., G.F.** 2004. Making Sense of What We Eat, Grand Forks Herald, May 12
- Combs, Jr., G.F.** 2005. My Pyramid: Portal to Good Health, Grand Forks Herald, May 4
- Combs, Jr., G.F.** 2008. Obesity: An Issue for the Country, an Issue for Grand Forks, Grand Forks Herald, Feb 15
- Combs, Jr., G.F.** 2009. Stretch Your Food Dollar, Not Your Belt, Grand Forks Herald, Nov 18
- Combs, Jr., G.F.** 2010. What Makes Grand Forks' Wellness Effort Really Big, Grand Forks Herald, Sept 21